

## ABSTRACTS

# Policy Research Working Paper Series

Numbers 3237–3347

To obtain copies of individual working papers, please call, email, or write to the contact person listed in the last paragraph of each abstract.

The working papers may also be downloaded from the DEC Research Website:  
<http://econ.worldbank.org>

The World Bank  
Research Support Team  
Development Economics  
April–June 2004



## Policy Research Working Paper Series: Instructions for Submission

1. **Prepare a 250 word abstract.** The abstract should set out the main questions addressed in the paper and the key findings, putting them (if appropriate) in the context of the relevant literature. For empirical papers, briefly describe the data, including such details as the period covered, the countries or country groups included, the size of the sample, and the type of survey, as appropriate. *The abstract will be published as submitted.* To ensure maximum impact for your work, consult existing working paper abstracts and test your abstract by asking a colleague who is not familiar with the paper to read it before submission.

2. **Obtain clearance memoranda.** You will need two types of clearance memoranda.

- **Clearance from your manager.** A note from your manager requesting that the paper be included in the Policy Research Working Paper Series.

- **Non-objection clearance for countries or regions discussed in the paper.** If the paper deals with specific countries, the author must obtain clearance on a non-objection basis from the relevant country director(s). For papers that deal with several countries within a single region or across regions, regional chief economists provide the clearance memoranda. The memoranda need not endorse the findings. It may simply state that the director (or regional chief economist) does not object to the paper appearing in the working paper series.

3. **Submit the abstract and paper, dataset (if any), and clearance memoranda to Benno Ndulu, Research Manager, Research Support Team (DECRS).** The submission can take the form of an email to Benno Ndulu. Attach the abstract and paper as a single Word document, and any associated dataset as a separate file (Excel or other widely used data format), along with the clearance memoranda. Then print the email as a cover note and submit it to DECRS along with a camera-ready one-sided original (a print out of your paper, exactly as you wish it to appear in print), one photocopy, and the electronic file(s).

DECRS staff screen each paper, may recommend changes in the paper to the submitting author, and advise the submitting manager and author whether the paper has been accepted for publication in the series. The author receives a maximum of 100 printed copies of the paper. The paper is released on the Web and printed within approximately a month of its acceptance in the series.

Questions regarding the Policy Research Working Paper Series can be directed to Evelyn Alfaro-Bloch (ext. 33984).

*The Policy Research Working Paper Series disseminates the findings of work in progress to encourage the exchange of ideas about development issues. An objective of the series is to get the findings out quickly, even if the presentations are less than fully polished. The papers carry the names of the authors and should be cited accordingly. The findings, interpretations, and conclusions expressed in this paper are entirely those of the authors. They do not necessarily represent the view of the World Bank, its Executive Directors, or the countries they represent.*

Policy Research  
Working Paper Series

Abstracts

Numbers 3237–3347



<i>WPS #</i>	<i>Author</i>	<i>Working Paper Title</i>	<i>Page</i>
<b>Agriculture</b>			
3248	Klaus Deininger and Raffaella Castagnini	Incidence and Impact of Land Conflict in Uganda	3
3258	Klaus Deininger, Raffaella Castagnini, and María A. González	Comparing Land Reform and Land Markets in Colombia: Impacts on Equity and Efficiency	6
3261	Jeffrey R. Vincent	Detecting Illegal Trade Practices by Analyzing Discrepancies in Forest Products Trade Statistics: An Application to Europe, with a Focus on Romania	7
3263	Lovell Jarvis and Esperanza Vera-Toscano	The Impact of Chilean Fruit Sector Development on Female Employment and Household Income	8
3306	Paul B. Siegel and Jeff Alwang	Export Commodity Production and Broad-based Rural Development: Coffee and Cocoa in the Dominican Republic	21
3346	Jyothsna Mody	Achieving Accountability through Decentralization: Lessons for Integrated River Basin Management	33
<b>Infrastructure</b>			
3268	Somik V. Lall, Richard Funderburg, and Tito Yepes	Location, Concentration, and Performance of Economic Activity in Brazil	10
3274	David Ehrhardt and Timothy Irwin	Avoiding Customer and Taxpayer Bailouts in Private Infrastructure Projects: Policy toward Leverage, Risk Allocation, and Bankruptcy	12
3278	Eugene Gurenko and Rodney lester	Rapid Onset Natural Disasters: The Role of Financing in Effective Risk Management	13
3286	Scott Wallsten, George Clarke, Luke Haggarty, Rosario Kaneshiro, Roger Noll, Mary Shirley, and Lixin Colin Xu	New Tools for Studying Network Industry Reforms in Developing Countries: The Telecommunications and Electricity Regulation Database	15
3292	Phil Burns and Christophe Riechmann	Regulatory Instruments and their Effects on Investment Behavior	17
3310	Alberto Chong, Jesko Hentschel, and Jaime Saavedra	Bundling Services and Household Welfare in Developing Countries: The Case of Peru	23
3318	Mudit Kapoor, Somik V. Lall, Mattias K. A. Lundberg, and Zmarak Shalizi	Location and Welfare in Cities: Impacts of Policy Interventions on the Urban Poor	25
3323	David Dollar, Mary Hallward-Driemeier, and Taye Mengistae	Investment Climate and International Integration	27
3339	Paul Nomba Um	A Policy Note on Telecommunications Reform in Algeria	31
3345	Xubei Luo	The Role of Infrastructure Investment Location in China's Western Development	33
3346	Jyothsna Mody	Achieving Accountability through Decentralization: Lessons for Integrated River Basin Management	33

<i>WPS #</i>	<i>Author</i>	<i>Working Paper Title</i>	<i>Page</i>
<b>Domestic finance</b>			
3246	Luc Laeven and Christopher Woodruff	The Quality of the Legal System, Firm Ownership, and Firm Size	3
3247	Luc Laeven	The Political Economy of Deposit Insurance	3
3264	Meghana Ayyagari	Does Cross-Listing Lead to Functional Convergence? Empirical Evidence	8
3278	Eugene Gurenko and Rodney lester	Rapid Onset Natural Disasters: The Role of Financing in Effective Risk Management	13
3282	Anwar Shah	Fiscal Decentralization in Developing and Transition Economies: Progress, Problems, and the Promise	14
3283	Felice B. Friedman	Regulation of Fixed Income Securities Markets in the United States	14
3298	Dimitri Vittas	Insurance Regulation in Jordan: New Rules—Old System	19
3308	Hubert Grignon Dumoulin and Mogens Kruse	The Regulatory and Supervisory Framework for Fixed Income Markets in Europe	22
3317	Aslı Demirgüç-Kunt, Inessa Love, and Vojislav Maksimovic	Business Environment and the Incorporation Decision	25
3319	Raymond Fisman and Inessa Love	Financial Development and Growth in the Short and Long Run	25
3338	Thorsten Beck, Aslı Demirgüç-Kunt, and Ross Levine	Finance, Inequality, and Poverty: Cross-Country Evidence	31
3342	Marie-Renée Bakker, Leora Klapper, and Gregory F. Udell	Financing Small and Medium-Size Enterprises with Factoring: Global Growth and Its Potential in Eastern Europe	32
3347	Quy-Toan Do and Andrei A. Levchenko	Trade and Financial Development	34
<b>Environment</b>			
3241	Hanan Jacoby and Limin Wang	Environmental Determinants of Child Mortality in Rural China: A Competing Risks Approach	2
3261	Jeffrey R. Vincent	Detecting Illegal Trade Practices by Analyzing Discrepancies in Forest Products Trade Statistics: An Application to Europe, with a Focus on Romania	7
3267	Piet Buys, Kenneth Chomitz, Susmita Dasgupta, Uwe Deichmann, Bjorn Larsen, Craig Meisner, Jostein Nygard, Kiran Pandey, Nat Pinnoi, and David Wheeler	The Economics of Regional Poverty-Environment Programs: An Application for Lao People's Democratic Republic	9
3269	Anjali Acharya, Ede Jorge Ijjasz-Velasquez, Kirk Hamilton, Piet Buys, Susmita Dasgupta, Craig Meisner, Kiran Pandey, and David Wheeler	How Has Environment Mattered? An Analysis of World Bank Resource Allocation	10

<i>WPS #</i>	<i>Author</i>	<i>Working Paper Title</i>	<i>Page</i>
3271	Timothy J. Considine and Donald F. Larson	The Environment as a Factor of Production	11
3281	Bas van der Klaauw and Limin Wang	Child Mortality in Rural India	14
3331	Sushenjit Bandyopadhyay and Priya Shyamsundar	Fuelwood Consumption and Participation in Community Forestry in India	29
3337	Sushenjit Bandyopadhyay, Michael N. Humavindu, Priya Shyamsundar, and Limin Wang	Do Households Gain from Community-based Natural Resource Management? An Evaluation of Community Conservancies in Namibia	31
3344	Susmita Dasgupta, Jong Ho Hong, Benoît Laplante, and Nlandu Mamingi	Disclosure of Environmental Violations and the Stock Market in the Republic of Korea	33
3346	Jyothsna Mody	Achieving Accountability through Decentralization: Lessons for Integrated River Basin Management	33
<b>Industry</b>			
3268	Somik V. Lall, Richard Funderburg, and Tito Yepes	Location, Concentration, and Performance of Economic Activity in Brazil	10
3273	Stefano Scarpetta and Thierry Tresselt	Boosting Productivity via Innovation and Adoption of New Technologies: Any Role for Labor Market Institutions?	11
3319	Raymond Fisman and Inessa Love	Financial Development and Growth in the Short and Long Run	25
3323	David Dollar, Mary Hallward-Driemeier, and Taye Mengistae	Investment Climate and International Integration	27
3335	Fabiano Bastos and John Nasir	Productivity and the Investment Climate: What Matters Most?	30
3342	Marie-Renée Bakker, Leora Klapper, and Gregory F. Udell	Financing Small and Medium-Size Enterprises with Factoring: Global Growth and Its Potential in Eastern Europe	32
3344	Susmita Dasgupta, Jong Ho Hong, Benoît Laplante, and Nlandu Mamingi	Disclosure of Environmental Violations and the Stock Market in the Republic of Korea	33
<b>Private sector development</b>			
3246	Luc Laeven and Christopher Woodruff	The Quality of the Legal System, Firm Ownership, and Firm Size	3
3250	Philip Keefer	What Does Political Economy Tell Us about Economic Development—and Vice Versa?	4
3253	Jan Rutkowski	Firms, Jobs, and Employment in Moldova	5
3255	Bineswaree Bolaky and Caroline Freund	Trade, Regulations, and Growth	5
3274	David Ehrhardt and Timothy Irwin	Avoiding Customer and Taxpayer Bailouts in Private Infrastructure Projects: Policy toward Leverage, Risk Allocation, and Bankruptcy	12

<i>WPS #</i>	<i>Author</i>	<i>Working Paper Title</i>	<i>Page</i>
3275	Beata Smarzynska Javorcik and Mariana Spatareanu	Do Foreign Investors Care about Labor Market Regulations?	12
3278	Eugene Gurenko and Rodney lester	Rapid Onset Natural Disasters: The Role of Financing in Effective Risk Management	13
3286	Scott Wallsten, George Clarke, Luke Haggarty, Rosario Kaneshiro, Roger Noll, Mary Shirley, and Lixin Colin Xu	New Tools for Studying Network Industry Reforms in Developing Countries: The Telecommunications and Electricity Regulation Database	15
3292	Phil Burns and Christophe Riechmann	Regulatory Instruments and their Effects on Investment Behavior	17
3298	Dimitri Vittas	Insurance Regulation in Jordan: New Rules—Old System	19
3311	Jahangir Saleh	Property Rights Institutions and Investment	23
3316	Karla Hoff and Arijit Sen	Homeownership, Community Interactions, and Segregation	25
3323	David Dollar, Mary Hallward-Driemeier, and Taye Mengistae	Investment Climate and International Integration	27
3335	Fabiano Bastos and John Nasir	Productivity and the Investment Climate: What Matters Most?	30
3339	Paul Numba Um	A Policy Note on Telecommunications Reform in Algeria	31
3342	Marie-Renée Bakker, Leora Klapper, and Gregory F. Udell	Financing Small and Medium-Size Enterprises with Factoring: Global Growth and Its Potential in Eastern Europe	32
3346	Jyothsna Mody	Achieving Accountability through Decentralization: Lessons for Integrated River Basin Management	33
<b>Governance</b>			
3246	Luc Laeven and Christopher Woodruff	The Quality of the Legal System, Firm Ownership, and Firm Size	3
3248	Klaus Deininger and Raffaella Castagnini	Incidence and Impact of Land Conflict in Uganda	3
3249	Jishnu Das	Equity in Educational Expenditures: Can Government Subsidies Help?	4
3250	Philip Keefer	What Does Political Economy Tell Us about Economic Development—and Vice Versa?	4
3254	Jean-Philippe Meloche, François Vaillancourt, and Serdar Yilmaz	Decentralization or Fiscal Autonomy? What Does Really Matter? Effects on Growth and Public Sector Size in European Transition Countries	5
3261	Jeffrey R. Vincent	Detecting Illegal Trade Practices by Analyzing Discrepancies in Forest Products Trade Statistics: An Application to Europe, with a Focus on Romania	7
3264	Meghana Ayyagari	Does Cross-Listing Lead to Functional Convergence? Empirical Evidence	8



<i>WPS #</i>	<i>Author</i>	<i>Working Paper Title</i>	<i>Page</i>
3277	Klaus Deininger and Paul Mpuga	Does Greater Accountability Improve the Quality of Delivery of Public Services? Evidence from Uganda	13
3282	Anwar Shah	Fiscal Decentralization in Developing and Transition Economies: Progress, Problems, and the Promise	14
3284	Steven B. Webb and Christian Y. Gonzalez	Bargaining for a New Fiscal Pact in Mexico	15
3291	Quy-Toan Do	Institutional Trap	17
3309	Steven B. Webb	Fiscal Responsibility Laws for Subnational Discipline: The Latin American Experience	23
3311	Jahangir Saleh	Property Rights Institutions and Investment	23
3315	Philip Keefer	A Review of the Political Economy of Governance: From Property Rights to Voice	24
3325	Waly Wane	The Quality of Foreign Aid: Country Selectivity or Donors Incentives?	27
3346	Jyothsna Mody	Achieving Accountability through Decentralization: Lessons for Integrated River Basin Management	33
<b>Urban development</b>			
3254	Jean-Philippe Meloche, François Vaillancourt, and Serdar Yilmaz	Decentralization or Fiscal Autonomy? What Does Really Matter? Effects on Growth and Public Sector Size in European Transition Countries	5
3268	Somik V. Lall, Richard Funderburg, and Tito Yepes	Location, Concentration, and Performance of Economic Activity in Brazil	10
3290	Alain Bertaud and Jan K. Brueckner	Analyzing Building Height Restrictions: Predicted Impacts, Welfare Costs, and a Case Study of Bangalore, India	17
3296	Dorte Verner and Erik Alda	Youth at Risk, Social Exclusion, and Intergenerational Poverty Dynamics: A New Survey Instrument with Application to Brazil	18
3301	Jishnu Das and Jeffrey Hammer	Which Doctor? Combining Vignettes and Item Response to Measure Doctor Quality	20
3313	Chris Elbers, Peter F. Lanjouw, Johan A. Mistiaen, Berk Özler, and Ken Simler	On the Unequal Inequality of Poor Communities	24
3318	Mudit Kapoor, Somik V. Lall, Mattias K. A. Lundberg, and Zmarak Shalizi	Location and Welfare in Cities: Impacts of Policy Interventions on the Urban Poor	25
<b>Transition</b>			
3253	Jan Rutkowski	Firms, Jobs, and Employment in Moldova	5
3254	Jean-Philippe Meloche, François Vaillancourt, and Serdar Yilmaz	Decentralization or Fiscal Autonomy? What Does Really Matter? Effects on Growth and Public Sector Size in European Transition Countries	5

<i>WPS #</i>	<i>Author</i>	<i>Working Paper Title</i>	<i>Page</i>
3275	Beata Smarzynska Javorcik and Mariana Spatareanu	Do Foreign Investors Care about Labor Market Regulations?	12
3291	Quy-Toan Do	Institutional Trap	17
3307	Célestin Monga	Latvia's Macroeconomic Options in the Medium Term: Fiscal and Monetary Challenges of European Union Membership	22
3336	Hippolyte Fofack and Celestin Monga	Dynamics of Income Inequality and Welfare in Latvia in the Late 1990s	30
3342	Marie-Renée Bakker, Leora Klapper, and Gregory F. Udell	Financing Small and Medium-Size Enterprises with Factoring: Global Growth and Its Potential in Eastern Europe	32
<b>Poverty</b>			
3240	Filipe R. Campante and Francisco H. G. Ferreira	Inefficient Lobbying, Populism, and Oligarchy	1
3242	Martin Ravallion	Pro-Poor Growth: A Primer	2
3243	Martin Ravallion	Competing Concepts of Inequality in the Globalization Debate	2
3248	Klaus Deininger and Raffaella Castagnini	Incidence and Impact of Land Conflict in Uganda	3
3249	Jishnu Das	Equity in Educational Expenditures: Can Government Subsidies Help?	4
3258	Klaus Deininger, Raffaella Castagnini, and María A. González	Comparing Land Reform and Land Markets in Colombia: Impacts on Equity and Efficiency	6
3259	Norbert M. Fiess and Dorte Verner	The Dynamics of Poverty and its Determinants: The Case of the Northeast of Brazil and its States	7
3260	Christina Paxson and Norbert Schady	Child Health and the 1988–92 Economic Crisis in Peru	7
3263	Lovell Jarvis and Esperanza Vera-Toscano	The Impact of Chilean Fruit Sector Development on Female Employment and Household Income	8
3265	Alessandro Nicita	Who Benefited from Trade Liberalization in Mexico? Measuring the Effects on Household Welfare	9
3266	Alessandro Nicita	Efficiency and Equity of a Marginal Tax Reform: Income, Quality, and Price Elasticities for Mexico	9
3267	Piet Buys, Kenneth Chomitz, Susmita Dasgupta, Uwe Deichmann, Bjorn Larsen, Craig Meisner, Jostein Nygard, Kiran Pandey, Nat Pinnoi, and David Wheeler	The Economics of Regional Poverty-Environment Programs: An Application for Lao People's Democratic Republic	9
3276	Klaus Deininger and Paul Mpuga	Economic and Welfare Effects of the Abolition of Health User Fees: Evidence from Uganda	12

<i>WPS #</i>	<i>Author</i>	<i>Working Paper Title</i>	<i>Page</i>
3277	Klaus Deininger and Paul Mpuga	Does Greater Accountability Improve the Quality of Delivery of Public Services? Evidence from Uganda	13
3280	Jishnu Das, Quy-Toan Do, and Berk Özler	Conditional Cash Transfers and the Equity-Efficiency Debate	13
3282	Anwar Shah	Fiscal Decentralization in Developing and Transition Economies: Progress, Problems, and the Promise	14
3294	Chris Elbers, Jean O. Lanjouw, and Peter Lanjouw	Imputed Welfare Estimates in Regression Analysis	18
3296	Dorte Verner and Erik Alda	Youth at Risk, Social Exclusion, and Intergenerational Poverty Dynamics: A New Survey Instrument with Application to Brazil	18
3297	Pierre-Richard Agénor	Unemployment-Poverty Tradeoffs	19
3301	Jishnu Das and Jeffrey Hammer	Which Doctor? Combining Vignettes and Item Response to Measure Doctor Quality	20
3302	Dorte Verner and Edinaldo Tebaldi	Convergence, Dynamics, and Geography of Economic Growth: The Case of Municipalities in Rio Grande do Norte, Brazil	20
3304	Derek H. C. Chen, Thilak Ranaweera, and Andriy Storozhuk	The RMSM-X+P: A Minimal Poverty Module for the RMSM-X	21
3310	Alberto Chong, Jesko Hentschel, and Jaime Saavedra	Bundling Services and Household Welfare in Developing Countries: The Case of Peru	23
3313	Chris Elbers, Peter F. Lanjouw, Johan A. Mistiaen, Berk Özler, and Ken Simler	On the Unequal Inequality of Poor Communities	24
3318	Mudit Kapoor, Somik V. Lall, Mattias K. A. Lundberg, and Zmarak Shalizi	Location and Welfare in Cities: Impacts of Policy Interventions on the Urban Poor	25
3321	Dorte Verner	Education and its Poverty-Reducing Effects: The Case of Paraíba, Brazil	26
3324	Magnus Lindelöw	Health Care Decisions as a Family Matter: Intrahousehold Education Externalities and the Utilization of Health Services	27
3326	Luc J. Christiaensen and Kalanidhi Subbarao	Toward an Understanding of Household Vulnerability in Rural Kenya	28
3329	Magnus Lindelöw	Sometimes More Equal Than Others: How Health Inequalities Depend on the Choice of Welfare Indicator	28
3333	David Dollar	Globalization, Poverty, and Inequality since 1980	30
3336	Hippolyte Fofack and Celestin Monga	Dynamics of Income Inequality and Welfare in Latvia in the Late 1990s	30
3338	Thorsten Beck, Aslı Demirgüç-Kunt, and Ross Levine	Finance, Inequality, and Poverty: Cross-Country Evidence	31
3341	Shaohua Chen and Martin Ravallion	How Have the World's Poorest Fared Since the Early 1980s?	32

<i>WPS #</i>	<i>Author</i>	<i>Working Paper Title</i>	<i>Page</i>
3343	Pierre-Richard Agénor, Derek H. C. Chen, and Michael Grimm	Linking Representative Household Models with Household Surveys for Poverty Analysis: A Comparison of Alternative Methodologies	32
3346	Jyothsna Mody	Achieving Accountability through Decentralization: Lessons for Integrated River Basin Management	33
<b>Rural development</b>			
3241	Hanan Jacoby and Limin Wang	Environmental Determinants of Child Mortality in Rural China: A Competing Risks Approach	2
3248	Klaus Deininger and Raffaella Castagnini	Incidence and Impact of Land Conflict in Uganda	3
3258	Klaus Deininger, Raffaella Castagnini, and María A. González	Comparing Land Reform and Land Markets in Colombia: Impacts on Equity and Efficiency	6
3261	Jeffrey R. Vincent	Detecting Illegal Trade Practices by Analyzing Discrepancies in Forest Products Trade Statistics: An Application to Europe, with a Focus on Romania	7
3282	Anwar Shah	Fiscal Decentralization in Developing and Transition Economies: Progress, Problems, and the Promise	14
3306	Paul B. Siegel and Jeff Alwang	Export Commodity Production and Broad-based Rural Development: Coffee and Cocoa in the Dominican Republic	21
3313	Chris Elbers, Peter F. Lanjouw, Johan A. Mistiaen, Berk Özler, and Ken Simler	On the Unequal Inequality of Poor Communities	24
3326	Luc J. Christiaensen and Kalanidhi Subbarao	Toward an Understanding of Household Vulnerability in Rural Kenya	28
3346	Jyothsna Mody	Achieving Accountability through Decentralization: Lessons for Integrated River Basin Management	33
<b>International economics</b>			
3237	Aaditya Mattoo and Sacha Wunsch	Pre-Empting Protectionism in Services: The WTO and Outsourcing	1
3238	Sumanta Chaudhuri, Aaditya Mattoo, and Richard Self	Moving People to Deliver Services: How Can the WTO Help?	1
3244	Çaglar Özden and Gunjan Sharma	Price Effects of Preferential Market Access: The Caribbean Basin Initiative and the Apparel Sector	2
3252	Ximena Clark, Timothy J. Hatton, and Jeffrey G. Williamson	Explaining U.S. Immigration, 1971–98	4
3255	Bineswaree Bolaky and Caroline Freund	Trade, Regulations, and Growth	5
3262	Paul Brenton and Takako Ikezuki	The Initial and Potential Impact of Preferential Access to the U.S. Market under the African Growth and Opportunity Act	8

<i>WPS #</i>	<i>Author</i>	<i>Working Paper Title</i>	<i>Page</i>
3265	Alessandro Nicita	Who Benefited from Trade Liberalization in Mexico? Measuring the Effects on Household Welfare	9
3270	Eugenia Baroncelli, Carsten Fink, and Beata Smarzynska Javorcik	The Global Distribution of Trademarks: Some Stylized Facts	10
3272	Hiau Looi Kee and Hian Teck Hoon	Trade, Capital Accumulation, and Structural Unemployment: An Empirical Study of the Singapore Economy	11
3275	Beata Smarzynska Javorcik and Mariana Spatareanu	Do Foreign Investors Care about Labor Market Regulations?	12
3288	Ilker Domaç and Alfonso Mendoza	Is There Room for Foreign Exchange Interventions under an Inflation Targeting Framework? Evidence from Mexico and Turkey	16
3293	Matias Berthelon and Caroline Freund	On the Conservation of Distance in International Trade	17
3299	David Dollar and Victoria Levin	The Increasing Selectivity of Foreign Aid, 1984–2002	19
3300	Rita Almeida	The Labor Market Effects of Foreign-owned Firms	20
3305	Lee G. Branstetter, Raymond Fisman, and C. Fritz Foley	Do Stronger Intellectual Property Rights Increase International Technology Transfer? Empirical Evidence from U.S. Firm-Level Panel Data	21
3312	Elena Ianchovichina	Trade Policy Analysis in the Presence of Duty Drawbacks	23
3314	Kyle Bagwell, Petros C. Mavroidis, and Robert W. Staiger	The Case for Tradable Remedies in WTO Dispute Settlement	24
3319	Raymond Fisman and Inessa Love	Financial Development and Growth in the Short and Long Run	25
3320	Aart Kraay, Norman Loayza, Luis Servén, and Jaime Ventura	Country Portfolios	26
3322	Enrique Alberola, Humberto López, and Luis Servén	Tango with the Gringo: The Hard Peg and Real Misalignment in Argentina	26
3323	David Dollar, Mary Hallward-Driemeier, and Taye Mengistae	Investment Climate and International Integration	27
3332	Bernard M. Hoekman, Keith E. Maskus, and Kamal Saggi	Transfer of Technology to Developing Countries: Unilateral and Multilateral Policy Options	29
3333	David Dollar	Globalization, Poverty, and Inequality since 1980	30
3342	Marie-Renée Bakker, Leora Klapper, and Gregory F. Udell	Financing Small and Medium-Size Enterprises with Factoring: Global Growth and Its Potential in Eastern Europe	32
3347	Quy-Toan Do and Andrei A. Levchenko	Trade and Financial Development	34

<i>WPS #</i>	<i>Author</i>	<i>Working Paper Title</i>	<i>Page</i>
<b>Social development</b>			
3250	Philip Keefer	What Does Political Economy Tell Us about Economic Development—and Vice Versa?	4
3277	Klaus Deininger and Paul Mpuga	Does Greater Accountability Improve the Quality of Delivery of Public Services? Evidence from Uganda	13
3280	Jishnu Das, Quy-Toan Do, and Berk Özler	Conditional Cash Transfers and the Equity-Efficiency Debate	13
3285	Derek H. C. Chen	Gender Equality and Economic Development: The Role for Information and Communication Technologies	15
3296	Dorte Verner and Erik Alda	Youth at Risk, Social Exclusion, and Intergenerational Poverty Dynamics: A New Survey Instrument with Application to Brazil	18
3316	Karla Hoff and Arijit Sen	Homeownership, Community Interactions, and Segregation	25
3324	Magnus Lindelöw	Health Care Decisions as a Family Matter: Intrahousehold Education Externalities and the Utilization of Health Services	27
3329	Magnus Lindelöw	Sometimes More Equal Than Others: How Health Inequalities Depend on the Choice of Welfare Indicator	28
<b>Labor and employment</b>			
3238	Sumanta Chaudhuri, Aaditya Mattoo, and Richard Self	Moving People to Deliver Services: How Can the WTO Help?	1
3253	Jan Rutkowski	Firms, Jobs, and Employment in Moldova	5
3256	Remco H. Ooestendorp	Globalization and the Gender Wage Gap	6
3263	Lovell Jarvis and Esperanza Vera-Toscano	The Impact of Chilean Fruit Sector Development on Female Employment and Household Income	8
3273	Stefano Scarpetta and Thierry Tresselt	Boosting Productivity via Innovation and Adoption of New Technologies: Any Role for Labor Market Institutions?	11
3280	Jishnu Das, Quy-Toan Do, and Berk Özler	Conditional Cash Transfers and the Equity-Efficiency Debate	13
3285	Derek H. C. Chen	Gender Equality and Economic Development: The Role for Information and Communication Technologies	15
3295	Wendy Cunningham and Carlos Ramos Gomez	The Home as Factory Floor: Employment and Remuneration of Home-based Workers	18
3296	Dorte Verner and Erik Alda	Youth at Risk, Social Exclusion, and Intergenerational Poverty Dynamics: A New Survey Instrument with Application to Brazil	18
3297	Pierre-Richard Agénor	Unemployment-Poverty Tradeoffs	19
3300	Rita Almeida	The Labor Market Effects of Foreign-owned Firms	20

<i>WPS #</i>	<i>Author</i>	<i>Working Paper Title</i>	<i>Page</i>
3302	Dorte Verner and Edinaldo Tebaldi	Convergence, Dynamics, and Geography of Economic Growth: The Case of Municipalities in Rio Grande do Norte, Brazil	20
3327	Gladys López-Acevedo	A Duration Analysis of CONALEP (Mexico's National Technical Professional School)	28
3328	Pierre-Richard Agénor, Mustapha K. Nabli, Tarik M. Yousef, and Henning Tarp Jensen	Labor Market Reforms, Growth, and Unemployment in Labor-Exporting Countries in the Middle East and North Africa	28
3330	José Canals-Cerdá and Cristóbal Ridaio-Cano	The Dynamics of School and Work in Rural Bangladesh	29
3336	Hippolyte Fofack and Celestin Monga	Dynamics of Income Inequality and Welfare in Latvia in the Late 1990s	30
<b>Macroeconomics and growth</b>			
3242	Martin Ravallion	Pro-Poor Growth: A Primer	2
3243	Martin Ravallion	Competing Concepts of Inequality in the Globalization Debate	2
3245	Mark Gradstein and Denis Nikitin	Educational Expansion: Evidence and Interpretation	3
3251	Craig Burnside and David Dollar	Aid, Policies, and Growth: Revisiting the Evidence	4
3254	Jean-Philippe Meloche, François Vaillancourt, and Serdar Yilmaz	Decentralization or Fiscal Autonomy? What Does Really Matter? Effects on Growth and Public Sector Size in European Transition Countries	5
3257	Robin Burgess and Anthony J. Venables	Toward a Microeconomics of Growth	6
3273	Stefano Scarpetta and Thierry Tresselt	Boosting Productivity via Innovation and Adoption of New Technologies: Any Role for Labor Market Institutions?	11
3279	Rodrigo Suescún	Raising Revenue with Transaction Taxes in Latin America: Or is it Better to Tax with the Devil You Know?	13
3285	Derek H. C. Chen	Gender Equality and Economic Development: The Role for Information and Communication Technologies	15
3287	Ilker Domaç	Explaining and Forecasting Inflation in Turkey	16
3288	Ilker Domaç and Alfonso Mendoza	Is There Room for Foreign Exchange Interventions under an Inflation Targeting Framework? Evidence from Mexico and Turkey	16
3291	Quy-Toan Do	Institutional Trap	17
3297	Pierre-Richard Agénor	Unemployment-Poverty Tradeoffs	19
3302	Dorte Verner and Edinaldo Tebaldi	Convergence, Dynamics, and Geography of Economic Growth: The Case of Municipalities in Rio Grande do Norte, Brazil	20

<i>WPS #</i>	<i>Author</i>	<i>Working Paper Title</i>	<i>Page</i>
3303	Francisco H. G. Ferreira, Phillippe G. Leite, Luiz A. Pereira da Silva, and Paulo Picchetti	Can the Distributional Impacts of Macroeconomic Shocks Be Predicted? A Comparison of the Performance of Macro-Micro Models with Historical Data for Brazil	21
3304	Derek H. C. Chen, Thilak Ranaweera, and Andriy Storozhuk	The RMSM-X+P: A Minimal Poverty Module for the RMSM-X	21
3307	Célestin Monga	Latvia's Macroeconomic Options in the Medium Term: Fiscal and Monetary Challenges of European Union Membership	22
3311	Jahangir Saleh	Property Rights Institutions and Investment	23
3320	Aart Kraay, Norman Loayza, Luis Servén, and Jaime Ventura	Country Portfolios	26
3333	David Dollar	Globalization, Poverty, and Inequality since 1980	30
3336	Hippolyte Fofack and Celestin Monga	Dynamics of Income Inequality and Welfare in Latvia in the Late 1990s	30
3338	Thorsten Beck, Asli Demirgüç-Kunt, and Ross Levine	Finance, Inequality, and Poverty: Cross-Country Evidence	31
3341	Shaohua Chen and Martin Ravallion	How Have the World's Poorest Fared Since the Early 1980s?	32
3343	Pierre-Richard Agénor, Derek H. C. Chen, and Michael Grimm	Linking Representative Household Models with Household Surveys for Poverty Analysis: A Comparison of Alternative Methodologies	32
3345	Xubei Luo	The Role of Infrastructure Investment Location in China's Western Development	33
3347	Quy-Toan Do and Andrei A. Levchenko	Trade and Financial Development	34
<b>Education</b>			
3239	Ritva Reinikka and Jakob Svensson	The Power of Information: Evidence from a Newspaper Campaign to Reduce Capture	1
3245	Mark Gradstein and Denis Nikitin	Educational Expansion: Evidence and Interpretation	3
3249	Jishnu Das	Equity in Educational Expenditures: Can Government Subsidies Help?	4
3280	Jishnu Das, Quy-Toan Do, and Berk Özler	Conditional Cash Transfers and the Equity-Efficiency Debate	13
3285	Derek H. C. Chen	Gender Equality and Economic Development: The Role for Information and Communication Technologies	15
3289	Damien de Walque	How Does the Impact of an HIV/AIDS Information Campaign Vary with Educational Attainment? Evidence from Rural Uganda	16



<i>WPS #</i>	<i>Author</i>	<i>Working Paper Title</i>	<i>Page</i>
3296	Dorte Verner and Erik Alda	Youth at Risk, Social Exclusion, and Intergenerational Poverty Dynamics: A New Survey Instrument with Application to Brazil	18
3302	Dorte Verner and Edinaldo Tebaldi	Convergence, Dynamics, and Geography of Economic Growth: The Case of Municipalities in Rio Grande do Norte, Brazil	20
3304	Derek H. C. Chen, Thilak Ranaweera, and Andriy Storozhuk	The RMSM-X+P: A Minimal Poverty Module for the RMSM-X	21
3321	Dorte Verner	Education and its Poverty-Reducing Effects: The Case of Paraíba, Brazil	26
3330	José Canals-Cerdá and Cristóbal Ridaó-Cano	The Dynamics of School and Work in Rural Bangladesh	29
3334	Joseph Shapiro and Jorge Moreno Trevino	Compensatory Education for Disadvantaged Mexican Students: An Impact Evaluation Using Propensity Score Matching	30
3340	Deon Filmer	If You Build It, Will They Come? School Availability and School Enrollment in 21 Poor Countries	32
3346	Jyothsna Mody	Achieving Accountability through Decentralization: Lessons for Integrated River Basin Management	33
<b>Health and population</b>			
3241	Hanan Jacoby and Limin Wang	Environmental Determinants of Child Mortality in Rural China: A Competing Risks Approach	2
3260	Christina Paxson and Norbert Schady	Child Health and the 1988–92 Economic Crisis in Peru	7
3276	Klaus Deininger and Paul Mpuga	Economic and Welfare Effects of the Abolition of Health User Fees: Evidence from Uganda	12
3277	Klaus Deininger and Paul Mpuga	Does Greater Accountability Improve the Quality of Delivery of Public Services? Evidence from Uganda	13
3280	Jishnu Das, Quy-Toan Do, and Berk Özler	Conditional Cash Transfers and the Equity-Efficiency Debate	13
3281	Bas van der Klaauw and Limin Wang	Child Mortality in Rural India	14
3289	Damien de Walque	How Does the Impact of an HIV/AIDS Information Campaign Vary with Educational Attainment? Evidence from Rural Uganda	16
3296	Dorte Verner and Erik Alda	Youth at Risk, Social Exclusion, and Intergenerational Poverty Dynamics: A New Survey Instrument with Application to Brazil	18
3301	Jishnu Das and Jeffrey Hammer	Which Doctor? Combining Vignettes and Item Response to Measure Doctor Quality	20
3304	Derek H. C. Chen, Thilak Ranaweera, and Andriy Storozhuk	The RMSM-X+P: A Minimal Poverty Module for the RMSM-X	21

<i>WPS #</i>	<i>Author</i>	<i>Working Paper Title</i>	<i>Page</i>
3324	Magnus Lindelöw	Health Care Decisions as a Family Matter: Intrahousehold Education Externalities and the Utilization of Health Services	27
3329	Magnus Lindelöw	Sometimes More Equal Than Others: How Health Inequalities Depend on the Choice of Welfare Indicator	28
3346	Jyothsna Mody	Achieving Accountability through Decentralization: Lessons for Integrated River Basin Management	33
<b>Public sector management</b>			
3239	Ritva Reinikka and Jakob Svensson	The Power of Information: Evidence from a Newspaper Campaign to Reduce Capture	1
3250	Philip Keefer	What Does Political Economy Tell Us about Economic Development—and Vice Versa?	4
3254	Jean-Philippe Meloche, François Vaillancourt, and Serdar Yilmaz	Decentralization or Fiscal Autonomy? What Does Really Matter? Effects on Growth and Public Sector Size in European Transition Countries	5
3276	Klaus Deininger and Paul Mpuga	Economic and Welfare Effects of the Abolition of Health User Fees: Evidence from Uganda	12
3277	Klaus Deininger and Paul Mpuga	Does Greater Accountability Improve the Quality of Delivery of Public Services? Evidence from Uganda	13
3282	Anwar Shah	Fiscal Decentralization in Developing and Transition Economies: Progress, Problems, and the Promise	14
3292	Phil Burns and Christophe Riechmann	Regulatory Instruments and their Effects on Investment Behavior	17
3309	Steven B. Webb	Fiscal Responsibility Laws for Subnational Discipline: The Latin American Experience	23
3311	Jahangir Saleh	Property Rights Institutions and Investment	23
3315	Philip Keefer	A Review of the Political Economy of Governance: From Property Rights to Voice	24
3316	Karla Hoff and Arijit Sen	Homeownership, Community Interactions, and Segregation	25
3318	Mudit Kapoor, Somik V. Lall, Mattias K. A. Lundberg, and Zmarak Shalizi	Location and Welfare in Cities: Impacts of Policy Interventions on the Urban Poor	25
3346	Jyothsna Mody	Achieving Accountability through Decentralization: Lessons for Integrated River Basin Management	33

### 3237. Preempting Protectionism in Services: The WTO and Outsourcing

Aaditya Mattoo and Sacha Wunsch  
(March 2004)

Cross-border trade in services is growing rapidly, with both industrial and developing countries among the most dynamic exporters. Despite the substantial global benefits from such trade, the adjustment pressures created in importing countries could provoke a protectionist backlash—some signs of which are already visible in procurement and regulatory restrictions. The current negotiations under the Doha Development Agenda offer an opportunity to lock in current openness and preempt protectionism. This paper describes how a bold initiative under the General Agreement on Trade in Services can help secure openness.

This paper—a product of Trade, Development Research Group—is part of a larger effort in the group to study the implications of liberalizing trade in services. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Michelle Chester, room MC3-322, telephone 202-458-2010, fax 202-522-1159, email address [mchester@worldbank.org](mailto:mchester@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. Aaditya Mattoo may be contacted at [amattoo@worldbank.org](mailto:amattoo@worldbank.org). (35 pages)

### 3238. Moving People to Deliver Services: How Can the WTO Help?

Sumanta Chaudhuri, Aaditya Mattoo,  
and Richard Self  
(March 2004)

The previous General Agreement on Trade in Services (GATS) negotiations produced little liberalization of the movement of individual service providers (mode 4), and the potentially large global gains from such movement remain unrealized. In the current negotiations, as part of the Doha Development Agenda, developing countries are seeking greater openness in their area of comparative advantage: the movement of providers unrelated to commercial presence abroad. At the same time, many multinational firms would like

easier intra-corporate movement of their personnel. The authors describe how this coincidence of interest could be harnessed to deliver greater openness for skilled service providers.

This paper—a product of Trade, Development Research Group—is part of a larger effort in the group to study the implications of liberalizing trade in services. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Michelle Chester, room MC3-322, telephone 202-458-2010, fax 202-522-1159, email address [mchester@worldbank.org](mailto:mchester@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. Aaditya Mattoo may be contacted at [amattoo@worldbank.org](mailto:amattoo@worldbank.org). (27 pages)

### 3239. The Power of Information: Evidence from a Newspaper Campaign to Reduce Capture

Ritva Reinikka and Jakob Svensson  
(March 2004)

Reinikka and Svensson exploit an unusual policy experiment to evaluate the effects of increased public access to information as a tool to reduce capture and corruption of public funds. In the late 1990s, the Ugandan government initiated a newspaper campaign to boost schools' and parents' ability to monitor local officials' handling of a large school-grant program. The results were striking: capture was reduced from 80 percent in 1995 to less than 20 percent in 2001. The authors use distance to the nearest newspaper outlet as an instrument for exposure to the campaign. Proximity to a newspaper outlet is positively correlated with the head teachers' knowledge about rules governing the grant program and the timing of releases of funds from the center, but uncorrelated with test scores of general ability. A strong (reduced-form) relationship exists between proximity to a newspaper outlet and reduction in capture of school funds since the newspaper campaign started. This pattern contrasts sharply with the outcomes in the five-year period prior to the campaign. Instrumenting for head teachers' knowledge about the grant program, the authors find that public access to information is a powerful deterrent to capture at the local level.

This paper—a product of Public Services, Development Research Group—is part of a larger effort in the group to study the role of information in making services work for poor people. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Hedy Sladovich, room MC3-607, telephone 202-473-7698, fax 202-522-1154, email address [hsladovich@worldbank.org](mailto:hsladovich@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [rreinikka@worldbank.org](mailto:rreinikka@worldbank.org) or [jvsvensson@worldbank.org](mailto:jvsvensson@worldbank.org). (37 pages)

### 3240. Inefficient Lobbying, Populism, and Oligarchy

Filipe R. Campante and Francisco  
H. G. Ferreira  
(March 2004)

Campante and Ferreira investigate the theoretical effects of lobbying and pressure group activities on both economic efficiency and on equity. Looking at lobbying as a political activity that takes place alongside production, they find that lobbies may generate economic inefficiency as part of the process of shifting the allocation of government expenditures in their favor. Outcomes of this nonelectoral political process will always be biased toward the group with a comparative advantage in politics, rather than in production. In a context where the main political conflict is one between "the rich" and "the poor," political equilibria may be either populist (inefficiently pro-poor) or oligarchic (inefficiently pro-rich), depending on each group's lobbying effectiveness.

This paper—a product of the Poverty Team, Development Research Group—is part of a larger effort in the group to understand the political economy of income distribution. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Patricia Sader, room MC3-556, telephone 202-473-3902, fax 202-522-1151, email address [psader@worldbank.org](mailto:psader@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [campante@fas.harvard.edu](mailto:campante@fas.harvard.edu) or [f Ferreira@worldbank.org](mailto:f Ferreira@worldbank.org). (33 pages)

### 3241. Environmental Determinants of Child Mortality in Rural China: A Competing Risks Approach

Hanan Jacoby and Limin Wang  
(March 2004)

Jacoby and Wang use a competing risk model to analyze environmental determinants of child mortality using the 1992 China National Health Survey, which collects information on cause of death. Their primary question is whether taking into account of cause of death using a competing risk model, compared with a simple model of *all causes* of mortality, affects conclusions about the effectiveness of policy interventions. There are two potential analytical advantages in using cause of death information: (1) obtaining more accurate estimates and (2) validating causal relationships. Although the authors do not find significant differences between estimates obtained from the competing risk model and those from simpler hazard models, they do find evidence supporting the causal interpretations of the effect of access to safe water on child mortality. The authors' analysis also suggest that a respondent-based health survey can be used to collect relatively reliable information on cause of death. Modifying future demographic and health survey instruments to collect cause of death information inexpensively may be worthwhile for enhancing the analytical strength of the surveys.

This paper—a joint product of Rural Development, Development Research Group, and the Environment Department—is part of a larger effort in the Bank to improve our understanding of the determinants of child mortality and provide policy advice to improve health outcomes in low-income countries. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Limin Wang, room MC4-611, telephone 202-473-7596, fax 202-522-3283, email address lwang1@worldbank.org. Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. Hanan Jacoby may be contacted at [hjacob@worldbank.org](mailto:hjacoby@worldbank.org). (25 pages)

### 3242. Pro-Poor Growth: A Primer

Martin Ravallion  
(March 2004)

These days it seems that almost everyone in the development community is talking about “pro-poor growth.” What exactly is it, and how can we measure it? Is ordinary economic growth always “pro-poor growth” or is that some special kind of growth? And if it is something special, what makes it happen? Ravallion first reviews alternative approaches to defining and measuring “pro-poor growth.” He then analyzes evidence on whether growth is pro-poor, what factors make it more pro-poor (including the role played by both initial inequality and changing inequality), and whether the factors that make the distribution of the gains from growth pro-poor come at a cost to growth. The author identifies some priorities for future research.

This paper—a product of the Poverty Team, Development Research Group—is part of a larger effort in the group to contribute to knowledge about the link between economic growth and poverty reduction. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Patricia Sader, room MC3-556, telephone 202-473-3902, fax 202-522-1151, email address [psader@worldbank.org](mailto:psader@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at [mravallion@worldbank.org](mailto:mravallion@worldbank.org). (28 pages)

### 3243. Competing Concepts of Inequality in the Globalization Debate

Martin Ravallion  
(March 2004)

Differing value judgments in measuring inequality underlie the conflicting factual claims about how much poor people have shared in the economic gains from globalization. Opponents in the debate differ in the extent to which they care about relative inequality versus absolute inequality, vertical inequalities versus horizontal inequalities, and whether they are consistently individualistic in assessing the extent of inequality. The value judgments

on these issues made by both sides need greater scrutiny if the globalization debate is to move forward.

This paper—a product of the Poverty Team, Development Research Group—is part of a larger effort in the group to contribute to the ongoing debate on globalization. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Patricia Sader, room MC3-556, telephone 202-473-3902, fax 202-522-1151, email address [psader@worldbank.org](mailto:psader@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at [mravallion@worldbank.org](mailto:mravallion@worldbank.org). (27 pages)

### 3244. Price Effects of Preferential Market Access: The Caribbean Basin Initiative and the Apparel Sector

Çağlar Özden and Gunjan Sharma  
(March 2004)

Preferential trade arrangements should be evaluated by analyzing their effect on prices, rather than the total value of trade, as emphasized in the theoretical literature but rarely implemented empirically. Özden and Sharma analyze the impact of the unilateral preferences granted by the U.S. Caribbean Basin Initiative (CBI) on the prices received by eligible apparel exporters. They use fixed effects generalized least squares (GLS) estimation to isolate the effects of various other factors (such as quality, exchange rates, and transactions costs) and identify the effects of tariff preferences. The authors find that CBI exporters only capture around two-thirds of their preference margin, despite the fairly competitive nature of the apparel market. This translates into a 9 percent increase in the relative prices they receive, but these numbers vary across countries and years. Countries specializing in higher-value items capture more of the preference margin while implementation of the North American Free Trade Agreement has a negative effect. The authors analyze the effect of Multi-Fibre Agreement (MFA) quotas imposed on third countries (such as China) and find that the benefits of CBI preferences will be significantly reduced once the quotas are fully removed in 2005.

This paper—a product of Trade, Development Research Group—is part of a larger effort in the group to analyze regional and preferential trade agreements. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Paulina Flewitt, room MC3-333, telephone 202-473-2724, fax 202-522-1159, email address [pflewitt@worldbank.org](mailto:pflewitt@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [cozden@worldbank.org](mailto:cozden@worldbank.org) or [sharma@econ.bsos.umd.edu](mailto:sharma@econ.bsos.umd.edu). (30 pages)

### 3245. Educational Expansion: Evidence and Interpretation

Mark Gradstein and Denis Nikitin  
(March 2004)

Gradstein and Nikitin document the vast expansion of schooling over the past several decades, as well as convergence in schooling measures across countries. They make the observation that poor countries today have higher average education levels than countries at the same level of economic development had in the past. They propose a simple model that suggests that these trends can be attributed to the intertemporal expansion of the world technological frontier, which enhances the demand for schooling. Their empirical analysis supports the view that educational expansion has occurred because of the increase in demand, especially in open economies, and not because of cost-reducing improvements in the education sector.

This paper—a product of Public Services, Development Research Group—is part of a larger effort in the group to study education expansion. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Hedy Sladovich, room MC3-607, telephone 202-473-7698, fax 202-522-1154, email address [hsladovich@worldbank.org](mailto:hsladovich@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [grade@bgumail.bgu.ac.il](mailto:grade@bgumail.bgu.ac.il) or [dnikitin@worldbank.org](mailto:dnikitin@worldbank.org). (19 pages)

### 3246. The Quality of the Legal System, Firm Ownership, and Firm Size

Luc Laeven and Christopher Woodruff  
(March 2004)

Employment in developing countries is disproportionately concentrated in very small firms. Laeven and Woodruff examine the extent to which the distribution of firm size is related to the quality of the legal system using data from Mexico. They combine Lucas' (1978) model of firm size with Himmelberg, Hubbard, and Love's (2001) consideration of idiosyncratic risk in a framework in which the distribution of entrepreneurial talent and aversion to idiosyncratic risk combine to determine the optimal size of firms. Their data allows them to focus on the differential impact of the legal system on proprietorships and corporations. Moreover, by focusing on firms in a single country, the data draw attention to the importance of variation in the administration of justice and the enforcement of legal verdicts. The authors find that Mexican states with more effective legal systems have larger firms. A one-standard deviation improvement in the quality of the legal system increases the average firm size by about 10–15 percent. The impact of the legal system is greatest in sectors in which proprietorships dominate. This pattern is consistent with better legal systems increasing the investment of firm owners by reducing the idiosyncratic risk they face. All of these findings are upheld when the authors instrument for institutional variables using the log of indigenous population in 1900 and the active presence of the drug trade in the state.

This paper—a product of Financial Sector Operations and Policy Department—is part of a larger effort in the department to study the governance of firms. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Rose Vo, room MC9-624, telephone 202-473-3722, fax 202-522-2031, email address [hvo1@worldbank.org](mailto:hvo1@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. Luc Laeven may be contacted at [llaeven@worldbank.org](mailto:llaeven@worldbank.org). (54 pages)

### 3247. The Political Economy of Deposit Insurance

Luc Laeven  
(March 2004)

Laeven uses a political economy framework to analyze cross-country differences in deposit insurance coverage. He finds supporting evidence of the significance of private interest theories in explaining coverage of deposit insurance. Deposit insurance coverage is significantly higher in countries where poorly capitalized banks dominate the market and in countries where depositors are poorly educated. The author does not find that coverage is significantly related to political-institutional variables, such as the degree of democracy or restraints on the executive, or to proxies for the general level of institutional development, such as per capita income or property rights. These results provide evidence in support of the private interest view, according to which risky banks lobby for extensive coverage.

This paper—a product of the Financial Sector Operations and Policy Department—is part of a larger effort in the department to study deposit insurance systems. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Rose Vo, room MC9-624, telephone 202-473-3722, fax 202-522-2031, email address [hvo1@worldbank.org](mailto:hvo1@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at [llaeven@worldbank.org](mailto:llaeven@worldbank.org). (42 pages)

### 3248. Incidence and Impact of Land Conflict in Uganda

Klaus Deininger and Raffaella Castagnini  
(March 2004)

While there is a large, though inconclusive, literature on the impact of land titles in Africa, little attention has been devoted to the study of land conflict, despite evidence on increasing incidence of such conflicts. Deininger and Castagnini use data from Uganda to explore who is affected by land conflicts, whether recent legal changes have helped to reduce their incidence, and to assess their impact on productivity. Results indicate that female-headed households and widows are

particularly affected and that the passage of the 1998 Land Act has failed to reduce the number of pending land conflicts. The authors also find evidence of a significant and quantitatively large productivity-reducing impact of land conflicts. This suggests that, especially in Africa, attention to land-related conflicts and exploration of ways to prevent and speedily resolve them would be an important area for policy as well as research.

This paper—a product of Rural Development, Development Research Group—is part of a larger effort in the group to explore the impact of land policies. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Elizabeth Herczeg, room MC3-542, telephone 202-473-2631, fax 202-522-1151, email address [eherczeg@worldbank.org](mailto:eherczeg@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. Klaus Deininger may be contacted at [kdeininger@worldbank.org](mailto:kdeininger@worldbank.org). (26 pages)

### 3249. Equity in Educational Expenditures: Can Government Subsidies Help?

Jishnu Das  
(March 2004)

When there are externalities across households, governments can improve economic outcomes by equitably subsidizing education. But this chain of causality works only if (1) allocated resources reach the final recipients, and (2) equity in public subsidies translates directly into equity in total educational expenditures, including private spending at the household level. Using a unique data set from Zambia, Das shows that whether these conditions are met depends on the specific schemes used to allocate resources as well as the exact form of the subsidies. First, subsidies allocated through clear guidelines and legislated rules reached the final recipients, but those allocated at the discretion of province and educational offices did not. Second, even those components of subsidies that were progressive (in that the share of total subsidies for the poor was greater than the share for the non-poor) had no effect on inequality in total educational expenditures due to the crowding-out of household spending.

This paper—a product of Public Services, Development Research Group—is

part of a larger effort in the group to understand the role of governments in improving the delivery of basic services. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Hedy Sladovich, room MC3-607, telephone 202-473-7698, fax 202-522-1154, email address [hsladovich@worldbank.org](mailto:hsladovich@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at [jdass@worldbank.org](mailto:jdass@worldbank.org). (39 pages)

### 3250. What Does Political Economy Tell Us about Economic Development—and Vice Versa?

Philip Keefer  
(March 2004)

Keefer reviews how three pillars of political economy—collective action, institutions, and political market imperfections—help us answer the question: Why do some countries develop and others do not? Each makes tremendous advances in our understanding of who wins and who loses in government decisionmaking, generally, but only a subset of this literature helps us answer the question. The study of political market imperfections strongly suggests that the lack of credibility of pre-electoral political promises and incomplete voter information are especially robust in explaining development outcomes. From the institutional literature, the most powerful explanation of contrasting development outcomes links political checks and balances to the credibility of government commitments.

This paper—a product of Investment Climate, Development Research Group—is part of a larger effort in the group to understand the political economy of economic development. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Paulina Sintim-Aboagye, room MC3-422, telephone 202-473-7644, fax 202-522-1155, email address [psintimaboagye@worldbank.org](mailto:psintimaboagye@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at [pkeefe@worldbank.org](mailto:pkeefe@worldbank.org). (39 pages)

### 3251. Aid, Policies, and Growth: Revisiting the Evidence

Craig Burnside and David Dollar  
(March 2004)

Burnside and Dollar revisit the relationship between aid and growth using a new data set focusing on the 1990s. The evidence supports the view that the impact of aid depends on the quality of state institutions and policies. The authors use an overall measure of institutions and policies popular in the empirical growth literature. The interaction of aid and institutional quality has a robust positive relationship with growth that is strongest in instrumental variable regressions. There is no support for the competing hypothesis that aid has the same positive effect everywhere. The authors also show that in the 1990s the allocation of aid to low-income countries favored those with better institutional quality. This “selectivity” is sensible if aid in fact is more productive in sound institutional and policy environments. The cross-country evidence on aid effectiveness is supported by other types of information as well: case studies, project-level evidence, and opinion polls support the view that corrupt institutions and weak policies limit the impact of financial assistance for development.

This paper—a product of the Development Economics Vice Presidency—is part of a larger effort in the Bank to research aid effectiveness. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Lucie Albert-Drucker, room MC4-321, telephone 202-473-2103, fax 202-522-0906, email address [lalbertdrucker@worldbank.org](mailto:lalbertdrucker@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [burnside@virginia.edu](mailto:burnside@virginia.edu) or [ddollar@worldbank.org](mailto:ddollar@worldbank.org). (35 pages)

### 3252. Explaining U.S. Immigration, 1971–98

Ximena Clark, Timothy J. Hatton,  
or Jeffrey G. Williamson  
(March 2004)

Clark, Hatton, and Williamson develop and estimate a model explaining the level and country-source composition of United States immigration since the early 1970s.

The model incorporates ratios of source country income, education, and demographic structure, as well as relative inequality. The authors' model also incorporates both network effects, as reflected in the stock of previous immigrants, and various controls for immigration quota policy. The model is estimated on a panel of 81 source countries for 1971–98. The results strongly support the influence of economic, demographic, and geographic variables as well as policy. The regression results are used to identify those factors that most influenced the changing composition of U.S. immigration by source.

This paper—a product of Investment Climate, Development Research Group—is part of a larger effort in the group to understand globalization. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Ximena Clark, room MC3-350, telephone 202-473-6369, fax 202-522-1155, email address [xclark@worldbank.org](mailto:xclark@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The other authors may be contacted at [hatton@essex.ac.uk](mailto:hatton@essex.ac.uk) or [jwilliam@kuznets.fas.harvard.edu](mailto:jwilliam@kuznets.fas.harvard.edu). (35 pages)

### 3253. Firms, Jobs, and Employment in Moldova

Jan Rutkowski  
(March 2004)

Despite low open unemployment, labor market outcomes are unsatisfactory in Moldova. Employment is low and job opportunities are scarce. Rutkowski examines labor market performance in Moldova by focusing on firm dynamics. He finds that the low level of employment in Moldova is due to the low rate of firm entry and the low rate of job creation in existing firms. Although the rate of job destruction is high, this is typical of transition economies, and is a problem only because it is not coupled with a commensurate rate of job creation. Firm exit is limited and thus is not an important factor behind job losses. The only sector of the economy that creates jobs on a net basis is that consisting of de novo private and small firms. However, in Moldova this sector is significantly smaller than in the most successful transition economies. The author argues that the primary factor behind the small size of the employment generating

sector is the high cost of doing business in Moldova. These include numerous administrative barriers, intrusive and costly inspections, and associated corruption. These costs—extremely high even by regional standards—lower the expected returns to business activity and thus discourage firm formation and growth. The author hence recommends improvements in the investment climate as a primary policy aimed at increasing productive employment and lowering unemployment. Priority should be given to fostering job creation through facilitating the formation of new firms and to reducing the constraints on the expansion of existing firms. The government should avoid measures aimed at forestalling the destruction of unviable jobs and firm exit as these are not conducive to long-run productivity and employment growth. Enhancing labor market flexibility is a further priority, as currently the apparently stringent provisions of the Labor Code are not complied with and enforced. Given the unsatisfactory business environment, active labor market programs are unlikely to be effective unless carefully targeted at the most disadvantaged worker groups.

This paper—a product of the Human Development Sector Unit, Europe and Central Asia Region—is part of a larger effort in the region to examine labor market performance and its contribution to economic growth and poverty reduction. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Jan Rutkowski, room H7-170, telephone 202-458-4569, fax 202-477-3387, email address [jrutkowski@worldbank.org](mailto:jrutkowski@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. (48 pages)

### 3254. Decentralization or Fiscal Autonomy? What Does Really Matter? Effects on Growth and Public Sector Size in European Transition Countries

Jean-Philippe Meloche, François Vaillancourt, and Serdar Yilmaz  
(March 2004)

This paper examines the importance of fiscal autonomy in the analysis of decentralization. Using new data published by the OECD (2001 and 2002), it reproduces several indicators and proposes new mea-

sures of decentralization that take into consideration subnational governments' autonomy over their revenues. Two models are reproduced: Davoodi and Zou (1998) on decentralization and economic growth, and Oates (1985), on decentralization and public sector size. Some evidence suggests that fiscal autonomy positively affects economic growth. Also, it seems to affect the size of the state, but evidence on this relation is limited. Despite some statistical weaknesses, there are sufficient indications to argue that subnational governments' fiscal autonomy should be a major concern when measuring decentralization.

This paper—a product of the Poverty Reduction and Economic Management Division, World Bank Institute—is part of a larger effort in the institute to take a critical look at the nature and implications of measuring the fiscal dimension of decentralization. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Serdar Yilmaz, room J4-171, telephone 202-473-9350, fax 202-676-9810, email address [syilmaz@worldbank.org](mailto:syilmaz@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The other authors may be contacted at [francois.vaillancourt@umontreal.ca](mailto:francois.vaillancourt@umontreal.ca) or [jean-philippe.meloche@umontreal.ca](mailto:jean-philippe.meloche@umontreal.ca). (28 pages)

### 3255. Trade, Regulations, and Growth

Bineswaree Bolaky and Caroline Freund  
(April 2004)

Trade does not stimulate growth in economies with excessive business and labor regulations. Bolaky and Freund examine the effect of openness on growth using cross-country regressions in both levels and changes. Results from the levels regressions imply that increased openness is associated with a lower standard of living in heavily-regulated economies. Growth regressions confirm that the effect of increased trade on growth is absent in these countries. The authors also find that once they control for the effect of trade on growth in heavily regulated economies, the evidence that trade positively affects growth is stronger than has been found in previous studies. Excessive regulations restrict growth because resources are prevented from moving into the most

productive sectors and to the most efficient firms following liberalization. In addition, in highly regulated economies, increased trade is more likely to occur in the wrong goods—that is, goods where comparative advantage does not lie. The results imply that countries must create a sound business environment before trade can be used as an engine of growth.

This paper—a product of Trade, Development Research Group—is part of a larger effort in the group to understand complementary policies needed for successful trade liberalization. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Michelle Chester, room MC3-322, telephone 202-458-2010, fax 202-522-1159, email address [mchester@worldbank.org](mailto:mchester@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. Caroline Freund may be contacted at [cfreund@worldbank.org](mailto:cfreund@worldbank.org). (40 pages)

### 3256. Globalization and the Gender Wage Gap

Remco H. Oostendorp  
(April 2004)

There are several theoretical reasons why globalization will have a narrowing as well as widening effect on the gender wage gap, but little is known about the actual impact, except for a number of country studies. Oostendorp provides a cross-country study of the impact of globalization on the occupational gender wage gap, based on the rarely used but most far-ranging survey of wages around the world, the International Labour Organization's October Inquiry. This annual survey was started in 1924 and contains a wealth of information on wages and the gender wage gap. For the period 1983–99, there is information on the gender wage gap in 161 narrowly defined occupations in more than 80 countries around the world. The author finds the following:

- The occupational gender wage gap appears to be narrowing with increases in GDP per capita.
- There is a significantly narrowing impact of trade and foreign direct investment (FDI) net inflows on the occupational gender wage gap for low-skill occupations, both in poorer and richer countries, and for high-skill occupations in richer countries.

- There is no evidence of a narrowing impact of trade, but there is evidence of a widening impact of FDI net inflows on the high-skill occupational gender wage gap in poorer countries.

- Wage-setting institutions have a strong impact on the occupational gender wage gap in richer countries.

This paper is a product of the Gender Division, Poverty Reduction and Economic Management Network. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Dawn Ballantyne, room MC4-432, telephone 202-458-7198, fax 202-522-3237, email address [dballantyne@worldbank.org](mailto:dballantyne@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at [roostendorp@feweb.vu.nl](mailto:roostendorp@feweb.vu.nl). (48 pages)

### 3257. Toward a Microeconomics of Growth

Robin Burgess and Anthony J. Venables  
(April 2004)

What drives growth at the microeconomic level? Burgess and Venables divide the factors that determine a location's growth performance into two groups, "1<sup>st</sup> advantage" and "2<sup>nd</sup> advantage." The term 1<sup>st</sup> advantage refers to the conditions that provide the environment in which new activities can be profitably developed, including most of the factors on which traditional theory has focused, such as access to inputs (labor and capital), access to markets, provision of basic infrastructure, and the institutional environment. The term 2<sup>nd</sup> advantage refers to factors that increase returns to scale and can lead to cumulative causation processes. They may be acquired by learning, through technological spillovers, or by the development of thick markets of suppliers and local skills.

The authors' analysis suggests that empirical investigation of the drivers of growth must shift down to a more microeconomic level. Such an analysis has become more feasible as data at the subnational level have become more available. By viewing recent empirical evidence on drivers of growth through their analytical framework, the authors are able to begin to sketch out a microeconomic agenda for growth. They emphasize that

it is the manner in which 1<sup>st</sup> and 2<sup>nd</sup> advantages interact that shapes the pattern of development.

The authors then turn to the example of how policy has affected manufacturing growth performance in India. They analyze links between the direction of state-level labor regulation and growth in the organized manufacturing sector, how state-led expansion of bank branches into rural areas has affected unregistered or informal manufacturing, and how the pre-reform technological capability of industries affected their response to liberalization in 1991.

The analysis suggests that policy choices at the local level affect growth. Both theory and empirics need to downshift to the microeconomic level if we are to make advances in identifying specific means of encouraging innovation and growth.

This paper is a product of Partnerships, Capacity Building, Development Economics Senior Vice Presidency. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Theresa Bampoe, room MC4-386, telephone 202-473-1017, fax 202-522-0304, email address [tbampoe@worldbank.org](mailto:tbampoe@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [r.burgess@lse.ac.uk](mailto:r.burgess@lse.ac.uk) or [a.j.venables@lse.ac.uk](mailto:a.j.venables@lse.ac.uk). (50 pages)

### 3258. Comparing Land Reform and Land Markets in Colombia: Impacts on Equity and Efficiency

Klaus Deininger, Raffaella Castagnini,  
and María A. González  
(April 2004)

Based on a large survey to compare the effectiveness of land markets and land reform in Colombia, Deininger finds that rental and sales markets were more effective in transferring land to poor but productive producers than was administrative land reform. The fact that land transactions were all of a short-term nature and that little land was transferred from very large to small land owners or the landless suggests that there may be scope for policies both to improve the functioning of land markets and to facilitate greater land access by the most disadvantaged. Analysis of the factors associated with success in a sample of land transfers from large



to small producers helps to identify key elements for policies in both respects.

This paper—a product of Rural Development, Development Research Group—is part of a larger effort in the group to analyze the impact of land policies. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Elizabeth Herczeg, room MC3-562, telephone 202-473-2631, fax 202-522-1150, email address [eherczeg@worldbank.org](mailto:eherczeg@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. Klaus Deininger may be contacted at [kdeininger@worldbank.org](mailto:kdeininger@worldbank.org). (27 pages)

### 3259. The Dynamics of Poverty and its Determinants: The Case of the Northeast of Brazil and its States

Norbert M. Fiess and Dorte Verner  
(April 2004)

In the northeast region of Brazil, the poverty picture of the past two decades reveals large fluctuations in the poverty level and poverty depth. Findings based on the Brazilian annual household survey (Pesquisa Nacional de Amostra Domiciliar, PNAD) datasets from 1981–99 reveal that individual characteristics such as education, experience, and labor market association of the household head are important correlates of poverty. Taking these into account, data reveal that a *Nordestino* (northeasterner) is 24 percentage points more likely to fall below the indigent poverty line than other Brazilians. Analyses also reveal large differences in poverty levels by education, and these differences have increased over time. Fiess and Verner observe that the probability of being poor is decreasing with increasing educational attainment. The gender of the household head does not matter for poverty, according to the poverty profile. But when the authors control for education and other individual characteristics, female-headed households have a much larger likelihood of being poor than male-headed households. Household size also matters for poverty. Larger households are more likely to experience poverty than smaller households, and the effect is concave. Moreover, households with children under age 5 appear more likely to fall below the poverty line than families with no children below age

5. The presence of old-aged people (above 65 years) in the household is an important factor contributing to poverty reduction.

This paper—a joint product of the Office of the Chief Economist and the Social Development Family, Latin America and the Caribbean Region—is part of a larger effort in the region to better understand poverty and its determinants in Brazil. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Ruth Izquierdo, room I8-012, telephone 202-458-4161, fax 202-522-7528, email address [rizquierdo@worldbank.org](mailto:rizquierdo@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [nfiess@worldbank.org](mailto:nfiess@worldbank.org) or [dverner@worldbank.org](mailto:dverner@worldbank.org). (109 pages)

### 3260. Child Health and the 1988–92 Economic Crisis in Peru

Christina Paxson and Norbert Schady  
(April 2004)

The effect of economic crises on child health is a topic of great policy importance. Paxson and Schady use data from the Demographic and Health Surveys (DHS) to analyze the impact of the profound 1988–92 economic crisis in Peru on infant mortality and anthropometrics. They show that there was an increase in the infant mortality rate of about 2.5 percentage points for children born in late 1989 and 1990, implying that about 17,000 more children died than would have in the absence of the crisis. The authors also present suggestive evidence that the crisis affected children's nutritional status. In 1992 children under the age of 6 who had been exposed to the crisis were shorter than same-aged children in 1996 and 2000. The authors do not have data on child height prior to the crisis, but the age profile of changes in nutritional status and the fact that the 1996 and 2000 height-for-age schedules are very similar to each other both suggest that the 1992 values represent declines from previous levels. Accounting for the precise source of the increase in infant mortality and in malnutrition is difficult, but it appears that both the decrease in household incomes and the collapse in expenditures on public health played an important role.

This paper—a product of Public Services, Development Research Group—is

part of a larger effort in the group to understand the impact of economic crises on poverty and human development. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Hedy Sladovich, room MC3-607, telephone 202-473-7698, fax 202-522-1154, email address [hsladovich@worldbank.org](mailto:hsladovich@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [cpaxson@princeton.edu](mailto:cpaxson@princeton.edu) or [nschady@worldbank.org](mailto:nschady@worldbank.org). (26 pages)

### 3261. Detecting Illegal Trade Practices by Analyzing Discrepancies in Forest Products Trade Statistics: An Application to Europe, with a Focus on Romania

Jeffrey R. Vincent  
(April 2004)

Discrepancies in bilateral trade statistics for forest products have recently attracted attention as potential indicators of illegal trade practices. For example, if exporters understate quantities to evade export taxes or quotas, then one might expect reported exports to be less than reported imports. Discrepancies in trade statistics can exist for reasons that have nothing to do with illegal activities, however, such as measurement error and shipment lags. Any attempt to infer evidence of illegal activities from statistical discrepancies must control for these other explanations.

Vincent estimates the discrepancies between reported imports and exports for bilateral flows of sawnwood traded by Romania and other European countries. He also examines whether these discrepancies reflect illegal activities by the traders.

The mean discrepancy for sawnwood exported by Romania during 1982–97 was significantly different from zero for coniferous sawnwood but not for nonconiferous sawnwood. Yet the sign of the discrepancy for coniferous sawnwood—reported exports tended to be greater than reported imports—implies that illegal trade activities were more likely occurring in Romania's trading partners than in Romania.

An econometric analysis of bilateral trade statistics for Romania and other European countries finds evidence that measurement error, shipment lags, and

intentional underreporting all play a role in explaining discrepancies for both types of sawnwood. The econometric model is not sufficiently reliable, however, for estimating the portion that was due solely to illegal activities or determining whether those activities occurred primarily in Romania or in its trading partners. Moreover, given that it is based on observed discrepancies in bilateral trade statistics, it fails to detect illegal trade activities that occur simultaneously in both importing and exporting countries. For these reasons, econometric methods appear unlikely to be of practical use in revealing illegal trade activities in the Romanian forest sector.

This paper—a product of the Environmentally and Socially Sustainable Development Sector Unit, Europe and Central Asia Region—is part of a larger effort in the region to develop and implement analytic techniques for addressing problems of governance in the forestry sector. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Peter Dewees, room H5-355, telephone 202-473-3959, fax 202-614-0959, email address [pdewees@worldbank.org](mailto:pdewees@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at [jvincent@ucsd.edu](mailto:jvincent@ucsd.edu). (40 pages)

### **3262. The Initial and Potential Impact of Preferential Access to the U.S. Market under the African Growth and Opportunity Act**

Paul Brenton and Takako Ikezuki  
(April 2004)

The ability to export clothing products under preferences with liberal rules of origin is the key factor currently determining whether the African Growth and Opportunity Act (AGOA) has a significant impact on non-oil exporting African countries. At present only a small number of countries receive substantial benefits and least developed countries that do not receive preferences for clothing have yet to see an impact of AGOA on their overall exports. However, the benefits from exporting clothing under AGOA appear fragile in the face of the removal of quotas in the United States on major suppliers, such as China, at the end of 2004, and the planned removal of the liberal rules of

origin that allow for the global sourcing of fabrics from least-cost locations. To entrench and enhance the benefits of AGOA, it is important that the scheme be extended over a much longer period, if not made permanent, and the special liberal rules of origin for clothing products be extended considerably beyond 2004. The effective inclusion of textile products and a number of high-duty agricultural products would also help to broaden the range of opportunities for African exporters in the U.S. market. Nevertheless it is important that the opportunities created by AGOA are integrated into a broader framework for promoting trade and that it be recognized that if the opportunities offered by more open trade are to be exploited, there must be concerted efforts to improve the environment for investment countries covered by AGOA.

This paper—a product of the International Trade Department, Poverty Reduction and Economic Management Network—is part of a larger effort in the network to analyze the impact of trade preferences. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Lili Tabada, room MC2-410, telephone 202-473-6896, fax 202-522-7551, email address [ltabada@worldbank.org](mailto:ltabada@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [pbrenton@worldbank.org](mailto:pbrenton@worldbank.org) or [tikezuki@worldbank.org](mailto:tikezuki@worldbank.org). (37 pages)

### **3263. The Impact of Chilean Fruit Sector Development on Female Employment and Household Income**

Lovell Jarvis and Esperanza Vera-Toscano  
(April 2004)

Modern fruit sector development in Chile led to agricultural employment for women, though usually only as temporary workers and often at a piece rate. Nonetheless, fruit sector employment offered women access to income and personal fulfillment previously lacking. Jarvis and Vera-Toscano link the fruit sector to improving female and family economic welfare in rural Chile and changing gender relations. Using a unique longitudinal data set, they examine women's decisions regarding labor force participation and employment, their earnings and contribu-

tions to household income, and their attitudes toward employment to understand how new opportunities are changing women, their households, and the rural sector.

This paper is a product of the Gender Division, Poverty Reduction and Economic Management Network. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Dawn Ballantyne, room MC4-432, telephone 202-458-7198, fax 202-522-3237, email address [dballantyne@worldbank.org](mailto:dballantyne@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. Lovell Jarvis may be contacted at [lsjarvis@ucdavis.edu](mailto:lsjarvis@ucdavis.edu). (40 pages)

### **3264. Does Cross-Listing Lead to Functional Convergence? Empirical Evidence**

Meghana Ayyagari  
(April 2004)

Ayyagari examines the effect of legal bonding on ownership and control structures of foreign firms cross-listing in the United States. Contrary to the predictions of corporate governance convergence theories, there is little evidence of convergence-related migration to a dispersed ownership structure on cross-listing. She finds that rather than as a means to change their governance structure, foreign firms use American Depository Receipts as a vehicle to sell control blocks, often to a new foreign owner. Firms that cross-list and sell stakes to domestic owners are from large economies with high stock market liquidity. In contrast, firm-level characteristics are more important predictors of a control change to a foreign owner. Cross-listing firms that sell control blocks to foreigners tend to be smaller, have low levels of debt, and have a high foreign income growth rate. The post cross-listing performance of firms that undergo a control change is also different from firms that do not experience a control change.

This paper—a product of Finance, Development Research Group—is part of a larger effort in the group to study corporate governance around the world. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Agnes Yaptenco, room MC3-300, telephone 202-473-8526, fax 202-522-1155, email ad-

dress [ayaptenco@worldbank.org](mailto:ayaptenco@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at [mayyagar@rhsmith.umd.edu](mailto:mayyagar@rhsmith.umd.edu). (64 pages)

### 3265. Who Benefited from Trade Liberalization in Mexico? Measuring the Effects on Household Welfare

Alessandro Nicita  
(April 2004)

This study performs an ex-post analysis of the effects of the trade liberalization in Mexico between 1989 and 2000, taking into account regional differences in the Mexican economy. The effects of trade liberalization are first translated into changes in regional prices and wages. Those estimates are plugged into a farm-household model to estimate the effect on households' welfare.

The findings suggest that trade liberalization has affected domestic prices and labor income differently both across income groups and geographically across the country, hence producing diverse outcomes on different households. Regarding prices, the results indicate that trade liberalization has lowered relative prices of most non-animal agricultural products and, while reducing the cost of consumption, has reduced households' agricultural income, widening the income gap between urban and rural areas. The findings also show that trade liberalization has had diverse effects on wage rates. Skilled workers, for which trade liberalization has produced an increase in wages, have benefited relative to unskilled workers. Wages of unskilled workers have in many regions decreased as a result of trade liberalization. Similar differences are found in the geographic distribution of the benefits of trade liberalization, with the states closest to the U. S. border gaining threefold more relative to the least developed states in the south. Therefore trade liberalization, although beneficial, has contributed to an increase in inequality between the south and the north of the country, urban and rural areas, and skilled and unskilled labor.

From a poverty perspective, the trade liberalization that occurred between 1989 and 2000 has had the direct effect of reducing poverty by about 3 percent, therefore lifting approximately 3 million individuals out of poverty.

This paper—a product of Trade, Development Research Group—is part of a larger effort in the group to study the linkages between trade and poverty. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Michelle Chester, room MC3-322, telephone 202-458-2010, fax 202-522-1159, email address [mchester@worldbank.org](mailto:mchester@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at [anicita@worldbank.org](mailto:anicita@worldbank.org). (55 pages)

### 3266. Efficiency and Equity of a Marginal Tax Reform: Income, Quality, and Price Elasticities for Mexico

Alessandro Nicita  
(April 2004)

Nicita investigates the effects of a marginal tax reform on household welfare in Mexico. He estimates the extent to which Mexican households react to changes in prices, and uses the estimates to simulate changes in social welfare resulting from marginal tax reform. Results indicate that poorer households tend to have significantly larger income and price elasticities. Hence, to correctly evaluate the effects of economic policies on the poor, it is important to estimate elasticities that reflect the behavioral responses of the poor rather than of the entire population.

The results from the micro simulation suggest that since poorer households rely mostly on maize, legumes, and vegetables to fulfill their caloric intake, any price reform that reduces the price of these products will have a larger effect on the welfare of poor households. In particular, reducing the taxes on maize, alcoholic beverages, and vegetables would be both more equitable and more efficient in terms of social welfare. Meanwhile, a reduction in the tax on legumes, sugar, and oils and fats, while inefficient, would contribute to reduce inequality. Finally, a decrease in the price of meat, wheat, and dairy products, while benefiting higher-income households, would have only a marginal impact on poorer households.

This paper—a product of Trade, Development Research Group—is part of a larger effort in the group to study the linkages between trade and poverty. Copies of the paper are available free from the

World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Michelle Chester, room MC3-322, telephone 202-458-2010, fax 202-522-1159, email address [mchester@worldbank.org](mailto:mchester@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at [anicita@worldbank.org](mailto:anicita@worldbank.org). (33 pages)

### 3267. The Economics of Regional Poverty-Environment Programs: An Application for Lao People's Democratic Republic

Piet Buys, Kenneth Chomitz, Susmita Dasgupta, Uwe Deichmann, Bjorn Larsen, Craig Meisner, Jostein Nygard, Kiran Pandey, Nat Pinnoi, and David Wheeler  
(April 2004)

Program administrators are often faced with the difficult problem of allocating scarce resources among regions in a country when interventions are aimed at addressing multiple objectives. One main concern is the tradeoff between poverty reduction and improvement of environmental quality. To provide a framework for analysis, the authors develop a model of optimal budget allocation that allows for variations in three factors: administrators' valuation of objectives; their willingness to accept tradeoffs among objectives and regional allotments; and regional administrative costs. The results from an application of this model using information for Lao People's Democratic Republic show that simple poverty indicators alone do not provide consistent guidelines for policy. However, when different poverty indicators are embedded in an optimizing model that incorporates preferences and costs, the resulting provincial allocations are very similar. This suggests that adoption of a formal analytical approach to resource allocation can help promote the harmonization of regional policy guidelines.

This paper—a joint product of Infrastructure and Environment, Development Research Group, and the Environment Sector Unit, East Asia and Pacific Region—is part of a larger effort in the Bank to understand poverty-environment links in different contexts. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Yasmin D'Souza, room MC2-622, telephone 202-473-1449,

fax 202-522-3230, email address ydsouza@worldbank.org. Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at kchomitz@worldbank.org, sdasgupta@worldbank.org, udeichmann@worldbank.org, cmeisner@worldbank.org, jnygard@worldbank.org, npinnoi@worldbank.org, or dwheeler1@worldbank.org. (39 pages)

### 3268. Location, Concentration, and Performance of Economic Activity in Brazil

Somik V. Lall, Richard Funderburg, and Tito Yepes  
(April 2004)

What are the prospects for economic development in lagging subnational regions? What are the roles of public infrastructure investments and fiscal incentives in influencing the location and performance of industrial activity? To examine these questions, Lall, Funderburg, and Yepes estimate a spatial profit function for industrial activity in Brazil that explicitly incorporates infrastructure improvements and fiscal incentives in the cost structure of individual firms. The authors use firm level data from the 2001 annual industrial survey along with spatially disaggregated regional data and find that there are considerable cost savings from being located in areas with relatively lower transport costs to reach large markets. In comparison, fiscal incentives, such as tax expenditures, have modest effects in terms of influencing firm level costs. Although the results suggest that firms benefit from being in locations with good access to markets, the authors do not suggest that improving interregional connectivity would necessarily assist lagging regions. In the short run, improving interregional connectivity implicitly reduces a natural tariff barrier so firms currently serving large markets and benefiting from economies of scale can more easily expand into new markets in competition with local producers. Therefore, producers in the leading regions can crowd out local producers, which would be detrimental for local production and employment in the lagging region.

This paper—a product of Infrastructure and Environment, Development Research Group—is part of a larger effort in the group to examine the impacts of spatial

policy interventions on the performance of economic activity. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Viktor Soukhanov, room MC2-523, telephone 202-473-5721, fax 202-522-3230, email address vsoukhanov@worldbank.org. Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at slall1@worldbank.org or tyepes@worldbank.org. (43 pages)

### 3269. How Has Environment Mattered? An Analysis of World Bank Resource Allocation

Anjali Acharya, Ede Jorge Iijasz-Vasquez, Kirk Hamilton, Piet Buys, Susmita Dasgupta, Craig Meisner, Kiran Pandey, and David Wheeler  
(April 2004)

How has environment mattered for the World Bank? The aggregate figures suggest that it has mattered a great deal, since the Bank's total environmental lending has exceeded \$US 9 billion over the past six years. In this paper the authors use newly available data to address a more precise version of the question: Across countries and themes, how well has the Bank's environmental lending and analytical and advisory activities (AAA) matched the incidence of environmental problems? For their assessment, the authors extend their previous work on local pollution and fragile lands (Buys and others 2003) to consideration of global emissions, biodiversity, water resources, and institutional development. They construct cross-country problem indicators for each environmental theme and combine them with country risk measures to estimate optimal thematic lending and AAA for each country. The authors then compare their estimates with actual lending and AAA to assess the match between environmental problems and the Bank's response.

The authors begin by constructing an overall indicator of environmental problems from their thematic indicators. Using regression analysis, they find a strong relationship between countries' general indicator values and the scale of their environmental borrowing, but a relatively weak relationship for AAA. At the thematic level, the authors find that problem indicators have relatively weak relationships with both lending and AAA. Adding

country risk to the analysis, they test an optimal allocation model and find that it is consistent with the Bank's actual lending and AAA since 1998. The authors conclude that their model's assignment of lending and AAA to countries reflects the Bank's actual experience with partner countries. The model's explanatory power is relatively low, however, and when they compare model assignments to actual allocations, the authors find many large discrepancies for countries and environmental themes. Some gaps may reflect activity by other donor institutions, but many others may represent problems with efficient implementation of the Bank's Environment Strategy. To promote further discussion of this issue, the authors use their optimal allocation model to develop measures of lending opportunity by environmental theme for the Bank's partner countries.

This paper—a joint product of the Environment Department and Infrastructure and Environment, Development Research Group—is part of a larger effort to implement the world Bank's new environment strategy. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Yasmin D'Souza, room MC2-622, telephone 202-473-1449, fax 202-522-3230, email address ydsouza@worldbank.org. Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at aacharya@worldbank.org, eijasz@worldbank.org, khamilton@worldbank.org, pbuys@worldbank.org, sdasgupta@worldbank.org, cmeisner@worldbank.org, kpandey@worldbank.org, or dwheeler1@worldbank.org. (50 pages)

### 3270. The Global Distribution of Trademarks: Some Stylized Facts

Eugenia Baroncelli, Carsten Fink, and Beata Smarzynska Javorcik  
(April 2004)

Trademarks are words, signs, symbols, or combinations thereof that identify goods as manufactured by a particular person or a company, therefore allowing consumers to distinguish between goods originating in different sources. Trademarks belong to the wider family of intellectual property rights (IPRs), and once registered benefit from legal protection against unauthorized use by entities other than the legal owner.

While some suggest that cross-border registrations of IPRs may be associated with welfare transfers from developing to industrial countries, surprisingly little is known about an important component of the global IPR system, namely, the worldwide distribution of trademark registrations. This study provides the first step in filling this gap in the literature. Its purpose is to present some new stylized facts which emerge from the analysis of a dataset compiled by the authors based on the statistical information published by the World Intellectual Property Organization (WIPO). Questions of interest include the distribution of trademarks between countries of different income levels, the share of trademark registrations accounted for by foreign residents and its variation across different income groups, the extent to which poor countries participate in the international trademark system, and the distribution of registrations across different sectors of the economy.

The stylized facts presented in this paper indicate that the global distribution of trademarks is skewed toward high-income industrial countries. The data also suggest that trademark registrations are concentrated in research and development-intensive sectors such as pharmaceuticals, scientific equipment, and the chemical industry.

This paper is a product of Trade, Development Research Group. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Michelle Chester, room MC3-322, telephone 202-458-2010, fax 202-522-1159, email address [mchester@worldbank.org](mailto:mchester@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [ebaroncelli@worldbank.org](mailto:ebaroncelli@worldbank.org), [cfink@worldbank.org](mailto:cfink@worldbank.org), or [bsmarzynska@worldbank.org](mailto:bsmarzynska@worldbank.org). (36 pages)

### 3271. The Environment as a Factor of Production

Timothy J. Considine and Donald F. Larson  
(April 2004)

Considine and Larson develop a model of environmental resource use in production with an empirical analysis of how electric power companies consume and bank sulfur dioxide pollution permits. The model considers emissions, fuels, and labor as variable inputs with quasi-fixed inputs of

permits and capital. Incorporating information from permit markets allows the authors to distinguish between user costs and asset shadow values. Their findings indicate that firms are holding stocks of pollution permits for reasons other than short-term cost savings. The results also reveal substantial substitution possibilities between emissions, permits stocks, and other factors of production. The authors speculate that anticipated secondary markets for carbon-offset inventories related to the flexibility mechanisms of the Kyoto Protocol will have similar effects for greenhouse-gas emitting firms.

This paper—a product of Infrastructure and Environment, Development Research Group—is part of a larger effort in the group to explore how markets can be used to reduce pollution. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Pauline Kokila, room MC3-305, telephone 202-473-3716, fax 202-522-1151, email address [pkokila@worldbank.org](mailto:pkokila@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [cpw@psu.edu](mailto:cpw@psu.edu) or [dlarson@worldbank.org](mailto:dlarson@worldbank.org). (38 pages)

### 3272. Trade, Capital Accumulation, and Structural Unemployment: An Empirical Study of the Singapore Economy

Hiau Looi Kee and Hian Teck Hoon  
(April 2004)

The past three and a half decades witnessed a distinctly declining trend in Singapore's unemployment rate, which dropped from an average annual rate of 7.85 percent in 1966–70 to 2.74 percent in 1991–2000. Kee and Hoon seek to identify and empirically examine the factors that have influenced Singapore's unemployment rate in an environment of low and stable inflation. They incorporate a union bargaining framework into a standard-factors trade model, in which an increase in the relative price or capital stock in the export sector raises the demand wage that firms can afford to pay relative to workers' fall-back income, and consequently lowers equilibrium unemployment. The magnitude of the effects depends on the fall-back income, the weight unions attach to employment, and the elasticity of labor demand, which the authors estimate us-

ing data on Singapore. The results show that labor unions in Singapore care more about employment than wages. Together with a small fall-back income and elastic labor demand, the authors show that given the same percentage change in relative export prices and capital accumulation in the export sector, the effect on unemployment is larger for the former. However, the empirical importance of capital accumulation in the export sector dominates increases in relative export prices in reducing unemployment since the manufacturing sector experienced a tremendous increase in capital inputs throughout the sample period, whereas the relative price of exports experienced a far smaller increase and only in the early part of the sample period. The authors conclude that through a very open trading regime, the tremendous increase in capital stock of the exporting sector has been the main reason behind Singapore's declining unemployment rate.

This paper—a product of Trade, Development Research Group—is part of a larger effort in the group to study the effect of trade on growth. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Michelle Chester, room MC3-322, telephone 202-458-2010, fax 202-522-1159, email address [mchester@worldbank.org](mailto:mchester@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [hlkee@worldbank.org](mailto:hlkee@worldbank.org) or [hthoon@smu.edu.sg](mailto:hthoon@smu.edu.sg). (36 pages)

### 3273. Boosting Productivity via Innovation and Adoption of New Technologies: Any Role for Labor Market Institutions?

Stefano Scarpetta and Thierry Tresselt  
(April 2004)

Scarpetta and Tresselt present empirical evidence on the determinants of industry-level multifactor productivity growth. They focus on "traditional factors," including the process of technological catch up, human capital, and research and development (R&D), as well as institutional factors affecting labor adjustment costs. Their analysis is based on harmonized data for 17 manufacturing industries in 18 industrial economies over the past two decades. The disaggregated analysis reveals that the process of technological

convergence takes place mainly in low-tech industries, while in high-tech industries, country leaders tend to pull ahead of the others. The link between R&D activity and productivity also depends on technological characteristics of the industries: while there is no evidence of R&D boosting productivity in low-tech industries, the effect is strong in high-tech industries, but the technology leaders tend to enjoy higher returns on R&D expenditure compared with followers. There is also evidence in the data that high labor adjustment costs (proxied by the strictness of employment protection legislation) can have a strong negative impact on productivity. In particular, when institutional settings do not allow wages or internal training to offset high hiring and firing costs, the latter reduce incentives for innovation and adoption of new technologies, and lead to lower productivity performance. Albeit drawn from the experience of industrial countries, this result may have relevant implications for many developing economies characterized by low relative wage flexibility and high labor adjustment costs.

This paper—a joint product of the Social Protection Team, Human Development Network, World Bank, and the International Monetary Fund—is part of a larger effort to understand what drives productivity growth. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact the Social Protection Advisory Service, room G7-130, telephone 202-458-5267, email address [socialprotection@worldbank.org](mailto:socialprotection@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [sscarpetta@worldbank.org](mailto:sscarpetta@worldbank.org) or [thierry.tresselt@imf.org](mailto:thierry.tresselt@imf.org). (31 pages)

### **3274. Avoiding Customer and Taxpayer Bailouts in Private Infrastructure Projects: Policy toward Leverage, Risk Allocation, and Bankruptcy**

David Ehrhardt and Timothy Irwin  
(April 2004)

Many private infrastructure projects mix regulation that subjects the private company to considerable risk, a government or regulator that is reluctant to see the company go bankrupt, and high leverage on the part of the company. If all goes well, equityholders make a profit, debtholders

are repaid, customers pay no more than they expected, and the government is not called on to bail the company out. If all goes badly enough, however, the prospect of bankruptcy will loom. Unwilling to see the company go bankrupt, however, the regulator will have to permit an unscheduled price increase, or the government will have to inject taxpayers' money into the firm. In other words, the combination means customers and taxpayers bear more risk than would appear from the regulations governing the private infrastructure project.

Ehrhardt and Irwin examine how these problems have played out in five cases. Then they describe how governments and regulators can quantify the extent of the problems and, using option-pricing techniques, value the customer and taxpayer guarantees involved. Finally, the authors analyze three options for mitigating the problem: making bankruptcy a more credible threat, limiting the private operator's leverage, and reducing the private operator's exposure to risk.

The authors conclude that appropriate policy depends on the tax system, the feasibility of enforcing bankruptcy, and the benefits of risk transfer from taxpayer to the private sector.

This paper—a product of Infrastructure Economics and Finance—is part of a larger effort in the Bank to improve government policy toward private infrastructure providers. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Monika Kosior, room H2-340, telephone 202-473-2030, fax 202-522-3481, email address [mkosior@worldbank.org](mailto:mkosior@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [david.ehrhardt@castalia.fr](mailto:david.ehrhardt@castalia.fr) or [tirwin@worldbank.org](mailto:tirwin@worldbank.org). (67 pages)

### **3275. Do Foreign Investors Care about Labor Market Regulations?**

Beata Smarzynska Javorcik  
and Mariana Spatareanu  
(April 2004)

Javorcik and Spatareanu take a new look at the regulatory determinants of foreign direct investment (FDI) by asking whether labor market flexibility affects FDI flows across 25 Western and Eastern European countries. Their analysis is

based on firm level data on new investments during the 1999–2001 period. The authors employ a variety of labor market flexibility measures that capture different aspects of labor laws along with a comprehensive set of controls for business climate characteristics. Indices of labor market regulations reflect the flexibility of individual and collective dismissals, the length of the notice period, and the required severance payment. The results suggest that greater flexibility in the host country's labor market relative to that in the investor's home country is associated with larger FDI inflows, and this effect is found to be stronger in the case of transition economies. The findings indicate that as the labor market flexibility in the host country increases from inflexible (for example, Slovakia) to flexible (for example, Hungary), the volume of investment increases by between 14 and 18 percent. FDI in service sectors appears to be more affected than investments in manufacturing.

This paper—a product of Trade, Development Research Group—is part of a larger effort in the group to examine the regulatory determinants of FDI inflows. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Michelle Chester, room MC3-322, telephone 202-458-2010, fax 202-522-1159, email address [mchester@worldbank.org](mailto:mchester@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [bsmarzynska@worldbank.org](mailto:bsmarzynska@worldbank.org) or [m spatareanu@worldbank.org](mailto:m spatareanu@worldbank.org). (25 pages)

### **3276. Economic and Welfare Effects of the Abolition of Health User Fees: Evidence from Uganda**

Klaus Deininger and Paul Mpuga  
(April 2004)

Deininger and Mpuga use household level data for Uganda for 1999–2000 and 2002–03, before and after the abolition of user fees for public health services, to explore the effect of this policy on different groups' ability to access health services and morbidity outcomes. They find that the policy change improved access and reduced the probability of sickness in a way that was particularly beneficial to the poor. Although the challenge of maintaining service quality remains, aggregate benefits



are estimated to be significantly larger than the estimated shortfalls from the abolition of user fees.

This paper—a product of Rural Development, Development Research Group—is part of a larger effort in the group to assess the impact of public services provision on household welfare. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Barbara Herczeg, room MC3-542, telephone 202-473-2631, fax 202-522-1151, email address [eherczeg@worldbank.org](mailto:eherczeg@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. Klaus Deininger may be contacted at [kdeininger@worldbank.org](mailto:kdeininger@worldbank.org). (28 pages)

### **3277. Does Greater Accountability Improve the Quality of Delivery of Public Services? Evidence from Uganda**

Klaus Deininger and Paul Mpuga  
(April 2004)

While the importance of corruption as a possible impediment to foreign investment in an international context is now well realized, it is not clear to what extent corruption affects, either directly through bribe-taking or indirectly through inadequate quality of public services, the level of economic activity by domestic entrepreneurs. Using a large survey from Uganda, Deininger and Mpuga show that domestic and foreign entrepreneurs, government officials, and households are unanimous in highlighting the pervasiveness and importance of corruption. Efforts to establish institutions to deal with corrupt practices have not been matched by public education on the proper procedures. The fact that such lack of knowledge on procedures to report corruption increases households' risk of being subject to bribery and significantly reduces the quality of public service delivery leads the authors to conclude that improved accountability will be important to reduce the incidence of corruption and improve delivery of public services.

This paper—a product of Rural Development, Development Research Group—is part of a larger effort in the group to identify determinants of effective public service provision. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Elizabeth Herczeg, room

MC3-542, telephone 202-473-2631, fax 202-522-1151, email address [eherczeg@worldbank.org](mailto:eherczeg@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. Klaus Deininger may be contacted at [kdeininger@worldbank.org](mailto:kdeininger@worldbank.org). (26 pages)

### **3278. Rapid Onset Natural Disasters: The Role of Financing in Effective Risk Management**

Eugene Gurenko and Rodney Lester  
(April 2004)

Gurenko and Lester provide a conceptual framework for designing a comprehensive risk management strategy for rapid onset natural disasters at the country level, with a particular emphasis on the role of catastrophe loss funding. The authors discuss the key policy and technical issues involved in building financially sustainable catastrophe risk transfer and funding programs in disaster prone countries and their links to risk mitigation. They also deal with the cognitive and political economy issues that are likely to arise and ways to accommodate them.

This paper—a product of the Financial Sector Operations and Policy Department—is part of a larger effort in the department to develop modern risk management approaches at the country level. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Eugene Gurenko, room MC9-707, telephone 202-458-5414, fax 202-614-0920, email address [egurenko@worldbank.org](mailto:egurenko@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. Rodney Lester may be contacted at [rl Lester@worldbank.org](mailto:rl Lester@worldbank.org). (35 pages)

### **3279. Raising Revenue with Transaction Taxes in Latin America: Or is it Better to Tax with the Devil You Know?**

Rodrigo Suescún  
(April 2004)

In recent years, various Latin American governments have resorted to taxes on bank debits and financial transactions as alternative ways of raising revenue. Considerable interest has developed in understanding the consequences of such re-

forms. Suescún constructs a dynamic general equilibrium model to assess the size of distortions and other quantitative implications associated with a transaction tax. The distinctive feature of the model is the non-neutrality property of the tax in the sense that it distorts the structure of relative prices of intermediate transactions, giving rise to tax "pyramiding." The effective tax rate ultimately borne by the economy is shown to depend on the complexity of the transaction structure. Calibrated for Latin America, the model finds that, contrary to existing evidence and conventional wisdom, a transaction tax is not a particularly burdensome levy in terms of economic growth and efficiency costs. The model also shows that if a government can credibly commit itself to an announced two-step reform in which it first uses a transaction tax temporarily and then replaces it with any other conventional tax, this policy will improve economic welfare relative to a tax reform where a consumption tax (or a labor income tax or a capital earnings tax) is exclusively used from the start to raise the required additional revenue.

This paper is a product of the Office of the Regional Chief Economist, Latin America and the Caribbean Region. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Ruth Izquierdo, room 18-014, telephone 202-458-4161, fax 202-522-7528, email address [rizquierdo@worldbank.org](mailto:rizquierdo@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at [rsuescun@worldbank.org](mailto:rsuescun@worldbank.org). (40 pages)

### **3280. Conditional Cash Transfers and the Equity-Efficiency Debate**

Jishnu Das, Quy-Toan Do, and Berk Özler  
(April 2004)

During the past decade, the use of conditional cash transfers to increase investment in human capital has generated considerable excitement in both research and policy forums. Such schemes are being increasingly adopted in a number of contexts and countries to improve outcomes in health, education, and child labor as they aim to balance the goals of current and future poverty reduction. In this paper, Das, Do, and Özler define any scheme requiring a specified course of action in order

to receive a benefit as a conditional cash transfer. This definition includes cash transfers based on human capital investments, but is sufficiently broad to encompass other schemes such as work-fare programs or consumption transfers.

The authors examine the rationales behind, the problems with, and the tradeoffs inherent to conditional cash transfer programs. They discuss two main concerns: low participation and fungibility. Low participation refers to the problem of program uptake. If individuals do not participate in the program, whether it was designed to increase human capital investment or to target resources, the program will not be successful. The problem of fungibility, however, depends on the rationale for the particular conditional cash transfer program. When used to increase efficiency, even when program uptake is high, program effects may be less than envisioned due to behavioral responses of households that lead to changes in the consumption of close substitutes. While researchers have typically addressed these issues separately, the authors emphasize the need for policymakers to incorporate a number of different factors in a comprehensive framework to design optimal conditional cash transfer schemes.

This paper—a product of the Poverty Team, Development Research Group—is part of a larger effort in the group to understand the rationale underlying some social programs. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Patricia Sader, room MC3-556, telephone 202-473-3902, fax 202-522-1153, email address [psader@worldbank.org](mailto:psader@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [jdass1@worldbank.org](mailto:jdass1@worldbank.org), [qdo@worldbank.org](mailto:qdo@worldbank.org), or [bozler@worldbank.org](mailto:bozler@worldbank.org). (29 pages)

### 3281. Child Mortality in Rural India

Bas van der Klaauw and Limin Wang  
(April 2004)

Van der Klaauw and Wang focus on infant and child mortality in rural areas of India. They construct a flexible duration model framework that allows for frailty at multiple levels and interactions between the child's age and individual socioeconomic, and environmental characteristics.

The model is estimated using the 1998–99 wave of the Indian National Family and Health Survey. The estimated results show that socioeconomic and environmental characteristics have significantly different effects on mortality rates at different ages. These are particularly important immediately after birth. The authors use the estimated model for policy experiments. These indicate that child mortality can be reduced substantially, particularly by improving the education of women and reducing indoor air pollution caused by cooking fuels. In addition, providing access to electricity and sanitation facilities can reduce under-five-years mortality rates significantly.

This paper—a product of the Environment Department—is part of a larger effort in the department to improve our understanding of environmental determinants of child mortality in rural India. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Limin Wang, room MC4-611, telephone 202-473-7596, fax 202-522-3283, email address [lwang1@worldbank.org](mailto:lwang1@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. Bas van der Klaauw may be contacted at [klaauw@tinbergen.nl](mailto:klaauw@tinbergen.nl). (39 pages)

### 3282. Fiscal Decentralization in Developing and Transition Economies: Progress, Problems, and the Promise

Anwar Shah  
(April 2004)

Shah discusses the revolution in public sector thinking that is transforming the public sectors of developing and transition countries. Countries are reconsidering their fiscal systems and searching for the right balance between central government control and decentralized governance. Political decentralization has advanced in most countries. Subnational expenditures in developing countries as a percentage of total public expenditures have also increased over the past two decades. However, the process is far from complete. In many countries, the central government is still involved in the delivery of local services, local governments have few sources of own-revenues, local governments have limited access to borrowing for capital projects, and the design of inter-governmental transfers does neither ad-

dress regional fiscal equity nor convey appropriate incentives for fiscal discipline, improved service delivery performance, and accountability to citizens.

Decentralized public governance can help realign public sector incentives through greater accountability to citizens, and attenuate the “democracy deficit” caused by globalization and the role of supranational institutions and regimes. However, this requires careful examination of the entire fiscal system. Elements of a comprehensive package of fiscal system reforms would include:

- Clarifying roles of various levels of government in public service delivery.
- Reassigning taxing responsibilities to ensure local revenue autonomy, accountability, and efficiency without endangering an internal common market.
- Designing fiscal transfers to ensure regional fiscal equity and to create an enabling environment for innovative and competitive service delivery.
- Facilitating responsible credit market access to subnational governments.
- Designing institutional arrangements for intergovernmental fiscal relations to better coordinate policies.
- Aligning operational capacity with the authorizing environment through the “accountability for results” framework of public management.

This paper—a product of the Poverty Reduction and Economic Management Division, World Bank Institute—is part of a larger effort in the institute to disseminate ideas in strengthening responsive, responsible, and accountable public governance. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Michelle Morris, room J4-403, telephone 202-473-7285, fax 202-676-9810, email address [mmorris1@worldbank.org](mailto:mmorris1@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at [ashah@worldbank.org](mailto:ashah@worldbank.org). (47 pages)

### 3283. Regulation of Fixed Income Securities Markets in the United States

Felice B. Friedman  
(April 2004)

Friedman looks at the development and regulation of the fixed income securities market in the United States. The U.S. fixed



income market is one of the oldest and most developed debt markets in the world. It is also one of the most heterogeneous, with the four key market segments—government securities, the securities of government-sponsored enterprises, municipal securities, and corporate debt securities—all being relatively large and deep. The author describes the evolution of fixed income market regulation in the United States, discussing both primary and secondary market regulation. She also looks at market integrity issues and the enforcement authority of the U.S. Securities and Exchange Commission, which is broad and has played an important role in the effectiveness of regulation. The author concludes that the fact that the U.S. fixed income market flourished for many years in the absence of regulation must be seen in a broader legal and regulatory context. While the debt market itself may have been unregulated, it operated within a larger framework of equity market regulation and enforcement, complemented by a long history of bank supervision that had a significant impact on its development. It is this context that permitted U.S. authorities to adopt regulation in stages, in response to differing demands and priorities. The dynamic nature of the regulation of the U.S. fixed income market—its development in response to market crises—underscores the need for regulation to remain responsive to market developments, and to be adapted to domestic constraints.

This paper—a product of Financial Sector Operations and Policy Department—is part of a larger effort in the department to strengthen regulation in emerging securities markets. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Noemi Dacanay, room MC9-702, telephone 202-473-4068, fax 202-522-7105, email address [ndacanay@worldbank.org](mailto:ndacanay@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at [ffriedman@worldbank.org](mailto:ffriedman@worldbank.org). (53 pages)

### 3284. Bargaining for a New Fiscal Pact in Mexico

Steven B. Webb and Christian Y. Gonzalez  
(April 2004)

Webb and Gonzalez consider the malaise with the present setup of fiscal federalism

in Mexico from the points of view of the main players—the federal government, the states, the municipalities, and the citizen voters—in order to identify the areas of potential common interest as well as the direct conflicts. There is a zero-sum game on some issues, like the size of aggregate transfers, but not on others, like raising tax collection and improving accountability for service delivery. The authors consider bargain packages that combine mutually beneficial changes and thus might obtain broad enough political support. They analyze the bargaining packages in two main tracks—one concerning tax assignments, revenue sharing, and tax administration, and another concerning the conjunction of earmarked transfers and accountability for service provision. An important result is that almost all states would find it fiscally attractive to impose a sales tax that replaced part of the federal value-added tax (VAT), even if the federal government reduced revenue sharing enough to cover half the cost of reducing the VAT rate to make room for the state tax.

This paper—a product of the Economic Policy Sector Unit, Latin America and the Caribbean Region—is part of a larger effort in the region to support the rationalization of the intergovernmental fiscal relations in the major federal countries. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Patricia Holt, room I8-168, telephone 202-473-7707, fax 202-522-2119, email address [pholt@worldbank.org](mailto:pholt@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [swebb@worldbank.org](mailto:swebb@worldbank.org) or [cgonzalez@worldbank.org](mailto:cgonzalez@worldbank.org). (28 pages)

### 3285. Gender Equality and Economic Development: The Role for Information and Communication Technologies

Derek H. C. Chen  
(April 2004)

Chen focuses on the role that information and communication technologies (ICTs) can play in improving gender equality, so as to enhance long-term economic growth. Employing OLS and IV panel regressions with country fixed-effects, he shows that increases in the level of ICT infrastructure

tend to improve gender equality in education and employment. In addition, the author shows that education among the general population is important for improving gender equality. The results provide evidence indicating that gender equality in education is an important contributor to gender equality in employment. Lastly, the results show that economic development tends to lead to some improvements in gender equality in the labor market. Hence, the use of ICTs to improve gender equality in education and employment may initiate a continuous cycle of positive reinforcing feedback effects between gender equality in employment and economic development, leading to further improvements in both.

This paper—a product of the Global Knowledge and Learning Division, World Bank Institute—is part of a larger effort in the institute to show that knowledge is key to economic development and human development. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Paythe Calandra, room J2-267, telephone 202-473-6440, fax 202-522-1492, email address [fcalandra@worldbank.org](mailto:fcalandra@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at [dchen@worldbank.org](mailto:dchen@worldbank.org). (34 pages)

### 3286. New Tools for Studying Network Industry Reforms in Developing Countries: The Telecommunications and Electricity Regulation Database

Scott Wallsten, George Clarke, Luke Haggarty, Rosario Kaneshiro, Roger Noll, Mary Shirley, and Lixin Colin Xu  
(April 2004)

Infrastructure industries—including telecommunications, electricity, water, and gas—underwent massive structural changes in the 1990s. During that decade, hundreds of privatization transactions valued at billions of dollars were completed in these sectors in developing and transition economies. While privatization has received the most attention, reforms also included market liberalization, structural changes like unbundling, and the introduction of new laws and regulations. To date, regulations have received far less attention than their potential economic

effects warrant, largely due to lack of data. In order to address this problem, the authors set out to compile a comprehensive and consistent dataset through an extensive survey of telecommunications and electricity regulators in developing countries. The authors describe the surveys and the resulting database. The database of telecommunications regulations includes 178 variables on regulatory governance and content in 45 countries. The database of electricity regulations includes 374 variables in 20 countries.

This paper—a product of Investment Climate, Development Research Group—is part of a larger effort in the group to understand regulatory and infrastructure reforms. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Paulina Sintim-Aboagye, room MC3-427, telephone 202-473-7644, fax 202-522-1155, email address [psintimaboagye@worldbank.org](mailto:psintimaboagye@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [swallsten@aei.org](mailto:swallsten@aei.org) or [gclarke@worldbank.org](mailto:gclarke@worldbank.org). (46 pages)

### 3287. Explaining and Forecasting Inflation in Turkey

Ilker Domaç  
(April 2004)

The growing adoption of an inflation targeting framework in emerging market economies has increased the importance of understanding inflation dynamics and forecasting its future path in these countries. Domaç considers the case of Turkey and investigates the performance of models that have some theoretical foundations. To this end, his study focuses on markup models, monetary models, and the Phillips curve. The findings suggest that the markup models have the best in-sample performance followed by money gap models and the Phillips curve. The empirical results from out-of-sample forecasting performance for the period covering the new economic program (May 2001–December 2002), however, show that the Phillips curve and the money gap models perform better than markup models. These findings, in turn, imply that (1) Phillips curves augmented with the exchange rate and money models might provide complementary views in the Turkish context; and (2) the relative importance of

output gap and monetary disequilibrium in the inflation process has increased under the floating exchange rate regime. The results underscore the importance of relying on multiple models of inflation in the conduct of Turkish monetary policy.

This paper—a product of the Poverty Management and Economic Management Sector Unit, Europe and Central Asia Region—is part of a larger effort in the region to enhance the knowledge on the inflationary process and its policy implications. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Nancy Davies-Cole, room H4-310, telephone 202-473-8482, fax 202-614-1162, email address [ndaviescole@worldbank.org](mailto:ndaviescole@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at [idomac@worldbank.org](mailto:idomac@worldbank.org). (41 pages)

### 3288. Is There Room for Foreign Exchange Interventions under an Inflation Targeting Framework? Evidence from Mexico and Turkey

Ilker Domaç and Alfonso Mendoza  
(April 2004)

The salient characteristics of emerging market economies coupled with the increasing adoption of inflation targeting in these countries has stimulated much debate about the role of the exchange rate in inflation targeting regimes. Domaç and Mendoza aim at shedding more light on this issue by investigating whether central bank foreign exchange interventions have had any impact on the volatility of the exchange rate in Mexico and Turkey since the adoption of the floating regime. To this end, their study, using daily data on foreign exchange intervention, employs an Exponential GARCH framework. Empirical results suggest that both the amount and frequency of foreign exchange interventions have decreased the volatility of the exchange rates in these countries. The authors' findings corroborate the notion that if foreign exchange interventions are carried out with finesse and sensibly—that is, not to defend a particular exchange rate—they could play a useful role in containing the adverse effects of temporary exchange rate shocks on inflation and financial stability.

This paper—a product of the Poverty Reduction and Economic Management Sector Unit, Europe and Central Asia Region—is part of a larger effort in the region to enhance the knowledge on the effectiveness of central bank foreign exchange interventions. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Nancy Davies-Cole, room H4-310, telephone 202-473-8482, fax 202-614-1162, email address [ndaviescole@worldbank.org](mailto:ndaviescole@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [idomac@worldbank.org](mailto:idomac@worldbank.org) or [amv101@york.ac.uk](mailto:amv101@york.ac.uk). (33 pages)

### 3289. How Does the Impact of an HIV/AIDS Information Campaign Vary with Educational Attainment? Evidence from Rural Uganda

Damien de Walque  
(April 2004)

The responsiveness to information is thought to be one channel through which education affects health outcomes. De Walque tests this hypothesis by examining the effectiveness of an information campaign that aims at preventing the HIV/AIDS epidemic in Uganda. Previous studies in the epidemiological literature have generally concluded that, in Africa, there was either a positive association or no association between HIV infection and schooling levels. Using individual level data from a cohort study following the general population of a cluster of villages in rural Uganda over 12 years, the author shows that, after more than a decade of prevention campaigns about the dangers of the epidemic, there has been a substantial evolution in the HIV/education gradient. Early in the epidemic, in 1990, there was no robust relation between HIV/AIDS and education. In 2000, among young individuals, in particular among females, education lowers the risk of being HIV positive. Results on HIV incidence in a duration framework confirm that finding by establishing that, for young individuals, education reduces the probability of seroconversion. These findings reveal that educated individuals have been more responsive to the HIV/AIDS information campaigns. The analysis of sexual behav-

ior reinforces that conclusion: condom use is associated positively with schooling levels.

This paper—a product of Public Services, Development Research Group—is part of a larger effort in the group to study the health benefits associated with education, as well as understand the determinants of the HIV/AIDS epidemic. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Hedy Sladovich, room MC3-607, telephone 202-473-7698, fax 202-522-1154, email address [hsladovich@worldbank.org](mailto:hsladovich@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at [ddewalque@worldbank.org](mailto:ddewalque@worldbank.org). (47 pages)

### 3290. Analyzing Building Height Restrictions: Predicted Impacts, Welfare Costs, and a Case Study of Bangalore, India

Alain Bertaud and Jan K. Brueckner  
(April 2004)

Bertaud and Brueckner analyze the effects of building height restrictions, providing a concrete welfare cost estimate for the city of Bangalore, India. Relying on several theoretical results, their analysis shows that the welfare cost imposed on its residents by Bangalore's building height restriction ranges between 3 and 6 percent of household consumption. This burden represents a significant share of individual resources, and its presence may push many marginal households into poverty.

This paper—a product of the Urban Unit, Transport and Urban Development Department—is part of a larger effort in the department to examine the effects of housing and land use regulations on poverty. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Oumi Himid, room MC11-558, telephone 202-458-0225, fax 202-522-3232, email address [uhimid@worldbank.org](mailto:uhimid@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [duatreb@msn.com](mailto:duatreb@msn.com) or [jbrueckn@uiuc.edu](mailto:jbrueckn@uiuc.edu). (40 pages)

### 3291. Institutional Trap

Quy-Toan Do  
(April 2004)

The author studies the persistence of inequality and inefficient governance in a physical capital accumulation model with perfect information, missing credit markets, and endogenous barriers to entry. When access to investment opportunities is regulated, rent-seeking entrepreneurs form coalitions of potentially varying size to bribe a regulator to restrict entry. Small coalitions run short of resources, while large coalitions suffer more severe free-rider problems. The distribution of wealth thus determines the equilibrium coalition structure of the economy and consequently the level of regulatory capture. A dynamic analysis supports the persistence of inefficiencies in the long run. Initial conditions determine whether the economy converges to a steady state characterized by efficient governance and low levels of inequality, or a path toward an institutional trap where regulatory capture and wealth inequality reinforce each other.

This paper—a product of the Poverty Team, Development Research Group—is part of a larger effort in the group to understand the determinants of institutions. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Patricia Sader, room MC3-556, telephone 202-473-3902, fax 202-522-1153, email address [psader@worldbank.org](mailto:psader@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at [qdo@worldbank.org](mailto:qdo@worldbank.org). (35 pages)

### 3292. Regulatory Instruments and their Effects on Investment Behavior

Phil Burns and Christoph Riechmann  
(April 2004)

Regulatory instruments have long been understood to have a powerful effect on investment, and part of the motivation for introducing higher-powered regulatory regimes and contracts was to reduce incentives for inefficiency and over-investment (gold plating) inherent in cost-plus regulatory schemes. In practice, the mix of incentives and the institutional frame-

work that make up a higher-powered regulatory regime can also lead to unintended distortions on investment behavior. In this paper Burns and Riechmann examine the key drivers of investment behavior and provide some examples of how these drivers have affected investment in practice. They conclude with a set of key areas and interrelationships that are at the core of a regulatory settlement, and therefore need to be designed appropriately to drive efficient investment behavior.

This paper—a product of the Finance and Private Sector Development Division, World Bank Institute—is part of a larger effort in the institute to promote good practice in infrastructure regulation. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Tomas Serebrisky, room J3-151, telephone 202-458-2872, fax 202-676-9874, email address [tserebrisky@worldbank.org](mailto:tserebrisky@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. Philip Burns may be contacted at [philip.burns@frontier-economics.com](mailto:philip.burns@frontier-economics.com). (31 pages)

### 3293. On the Conservation of Distance in International Trade

Matias Berthelon and Caroline Freund  
(May 2004)

The volume of world trade has grown more than twice as fast as real world income since 1980. Surprisingly, the effect of distance on trade has increased during this period. It could be that countries are trading greater volumes of goods that are highly sensitive to distance. An alternative explanation is that distance has become more important for a significant share of goods. Using highly disaggregated bilateral trade data, Berthelon and Freund find that adjustment in the composition of trade has not influenced the way in which distance affects trade. In contrast, for about 25 percent of industries, distance has become more important. This implies that the increased distance sensitivity of trade is a result of a change in relative trade costs that affects many industries, as opposed to a shift to more distance-sensitive products. The authors also find that homogeneous products are twice as likely to have become more distance sensitive as compared with differentiated goods. This is consistent with the hypothesis that fall-

ing search costs, resulting from improvements in transport and communications, are relatively more important for differentiated goods. The results offer no evidence of the "death of distance." Rather, they suggest that distance-related relative trade costs have remained unchanged or shifted in favor of proximate markets.

This paper—a product of Trade, Development Research Group—is part of a larger effort in the group to understand the effect of technology on trade. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Michelle Chester, room MC3-322, telephone 202-458-2010, fax 202-522-1159, email address [mchester@worldbank.org](mailto:mchester@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. Caroline Freund may be contacted at [cfreund@worldbank.org](mailto:cfreund@worldbank.org). (32 pages)

### 3294. Imputed Welfare Estimates in Regression Analysis

Chris Elbers, Jean O. Lanjouw,  
and Peter Lanjouw  
(May 2004)

Elbers, Lanjouw, and Lanjouw discuss the use of imputed data in regression analysis, in particular the use of highly disaggregated welfare indicators (from so-called "poverty maps"). They show that such indicators can be used both as explanatory variables on the right-hand side and as the phenomenon to explain on the left-hand side. The authors try out practical ways of adjusting standard errors of the regression coefficients to reflect the error introduced by using imputed, rather than actual, welfare indicators. These are illustrated by regression experiments based on data from Ecuador. For regressions with imputed variables on the left-hand side, the authors argue that essentially the same aggregate relationships would be found with either actual or imputed variables. They address the methodological question of how to interpret aggregate relationships found in such regressions.

This paper—a product of the Poverty Team, Development Research Group—is part of a larger effort in the group to develop methods of welfare estimation at the micro level. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433.

Please contact Patricia Sader, room MC3-556, telephone 202-473-3902, fax 202-522-1153, email address [psader@worldbank.org](mailto:psader@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [celbers@feweb.vu.nl](mailto:celbers@feweb.vu.nl), [planjouw@worldbank.org](mailto:planjouw@worldbank.org), or [planjouw@worldbank.org](mailto:planjouw@worldbank.org). (21 pages)

### 3295. The Home as Factory Floor: Employment and Remuneration of Home-based Workers

Wendy Cunningham and Carlos Ramos  
Gomez  
(May 2004)

Home-based work, defined as nonprofessionals who perform market work from their homes, is an increasingly recognized form of employment in Latin America. The majority of the research on this segment of the labor force relies on small sample, qualitative data, which find that home-based workers are women, children, and adults with disabilities with low skills who work long hours for low wages. Cunningham and Gomez use a large random sample of control groups of non-home-based workers, including men, in their analysis and examine the home-based work sector in Brazil, Ecuador, and Mexico in 1999. Their results show that in all three countries, women are overrepresented among home-based workers, particularly older women, those with low levels of education, and those with children or spouses, unlike men for whom these factors do not matter. Female home-based workers earn 25–60 percent less an hour than do non-home-based working women and they work one-third to one-half as many hours each week. Home-based working men, on the other hand, earn 0–17 percent less than do men who do not work from their homes, and they only work 10 percent fewer hours a week. The wage and work hour gaps for women are largely related to marital status, not the presence of children, suggesting that simply being the primary caregiver in the household, regardless of the actual time constraints (children) is the key factor to differences between home-based working women and those who work outside of their homes.

This paper—a product of the Gender Sector Unit, Latin America and the Caribbean Region—is part of a larger effort in the region to mainstream gender in

regional research. It served as a background paper for the region's flagship report for 2001, *From Natural Resources to the Knowledge Economy*. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Wendy Cunningham, room I7-145, telephone 202-473-2384, fax 202-676-0358, email address [wcunningham@worldbank.org](mailto:wcunningham@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. (43 pages)

### 3296. Youth at Risk, Social Exclusion, and Intergenerational Poverty Dynamics: A New Survey Instrument with Application to Brazil

Dorte Verner and Erik Alda  
(May 2004)

Verner and Alda address the underlying causes of problems and risks faced by poor and excluded youth of 10–24 years of age. They develop a survey instrument that addresses poverty in a broad sense, including hunger, early pregnancy and fatherhood, violence, crime, drug use, low levels of social capital, and low educational attainment. The authors also shed light on intergenerational transfer of risks that are considered to induce poverty. They document findings based on the survey data gathered in three poor urban neighborhoods in Fortaleza in Northeast Brazil. Their main findings show that:

- Poor youth are at considerable risk of growing up without their father. Only 7 percent grow up with their father present in the household.
- The intergenerational transmission of low education attainment is at play, but it is diminishing.
- The risk of early pregnancy and fatherhood is large among poor and excluded youth—31 percent of the youth had their first child before age 16, triple that of the adult population.
- The risk of sexual abuse and violence within the household exists—6 percent of the youth answered that they had their first sexual relationship with a family member, and 13 percent grow up in households with violence.
- The social capital levels are low—only 5 percent of the youth and 9 percent of the adults have measurable social capital.

- The risk of growing up in a violent neighborhood is large—59 percent of the youth claim that they live in a violent neighborhood, 80 percent feel unsafe in their neighborhood, and 50 percent feel unsafe at home.

This paper—a product of the Social Development Family, Latin America and the Caribbean Region—is part of a larger effort in the region to reduce poverty. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Grissel Prieto, room 16-226, telephone 202-473-6346, fax 202-676-0199, email address [gprieto@worldbank.org](mailto:gprieto@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. Dorte Verner may be contacted at [dverner@worldbank.org](mailto:dverner@worldbank.org). May 2004. (45 pages)

### 3297. Unemployment-Poverty Tradeoffs

Pierre-Richard Agénor  
(May 2004)

Agénor examines the potential tradeoffs that may arise between poverty alleviation and unemployment reduction. He discusses various analytical arguments that may provide a rationale for their existence, and uses three alternative methodologies to assess their relevance: a vector autoregression framework (which is applied to Brazil and Chile), cross-country regressions, and simulations with a structural macro model linked to a household survey. Impulse response functions to output and wage shocks indicate no short-run tradeoff between unemployment and poverty. By contrast, regression results, which control for a variety of determinants of poverty rates across countries, suggest that such a tradeoff may indeed exist. Simulations with the structural model show that labor market reforms may induce both short- and long-run tradeoffs between the composition of unemployment and the incidence of poverty among household groups.

This paper—a product of the Poverty Reduction and Economic Management Division, World Bank Institute—is part of a larger effort in the institute to understand the links between unemployment reduction and poverty alleviation. Policy Research Working Papers are posted on the Web at <http://econ.worldbank.org>. The

author may be contacted at [pagenor@worldbank.org](mailto:pagenor@worldbank.org). (51 pages)

### 3298. Insurance Regulation in Jordan: New Rules—Old System

Dimitri Vittas  
(May 2004)

The Jordanian insurance market has been free from extensive state ownership and pervasive premium, product, investment, and reinsurance controls. However, these positive features have been marred by the licensing of a large number of private companies, often on political rather than professional criteria, and the resulting fragmentation of the sector. Various policies have perpetuated the fragmentation of the sector, while regulatory forbearance has allowed the continuing operation of several weak companies.

Despite the avoidance of pervasive controls and extensive state ownership, and the presence of a large number of private companies, the insurance industry is not well developed. This mainly reflects the underdevelopment of life insurance. In contrast, the level of general insurance is comparable to several other developing countries in the region and elsewhere.

A major modernization effort has been undertaken in recent years. This has included the enactment of a new insurance law and the creation of a new Insurance Commission. The latter has made considerable progress in expanding its staff, undertaking a wide-ranging training program to upgrade skills, and implementing a multi-year action plan aimed at modernizing the regulatory framework and enhancing the efficiency of the sector.

The new rules entail the use of sound licensing and financial solvency criteria, while reducing the role of political favoritism and regulatory forbearance in deciding the fate of ailing companies. However, several of the modern rules are difficult to implement because of the predominance of family-based companies, the shortage of experienced non-executive directors, the dearth of specialized professionals such as actuaries and auditors, the absence of comprehensive statistical databases, and the lack of liquidity of asset markets.

To overcome these difficulties, the Insurance Commission needs to strengthen its proactive approach to insurance supervision, complement the role of company

directors, and even develop asset valuation models. Its success requires a change of traditional attitudes and acceptance of the rigors of a sound regulatory framework, as well as strong political backing for early remedial intervention of weak companies.

Another major challenge is the development of life insurance. In addition to strong fiscal incentives, this would also require a robust regulatory framework to protect the interests of policy holders.

This paper—a product of the Financial Sector Operations and Policy Department—is part of a larger effort in the department to study insurance regulation. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Priscilla Infante, room MC9-702, telephone 202-473-7642, fax 202-522-7105, email address [pinfante@worldbank.org](mailto:pinfante@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at [dvittas@worldbank.org](mailto:dvittas@worldbank.org). (38 pages)

### 3299. The Increasing Selectivity of Foreign Aid, 1984–2002

David Dollar and Victoria Levin  
(May 2004)

Dollar and Levin examine the allocation of foreign aid by 41 donor agencies, bilateral and multilateral. Their policy selectivity index measures the extent to which a donor's assistance is targeted to countries with sound institutions and policies, controlling for per capita income and population. The poverty selectivity index analogously looks at how well a donor's assistance is targeted to poor countries, controlling for institutional and policy environment as measured by a World Bank index. The authors' main finding is that the same group of multilateral and bilateral aid agencies that are very policy focused are also very poverty focused. The donors that appear high up in both rankings are the World Bank's International Development Association, the International Monetary Fund's Enhanced Structural Adjustment Facility, Denmark, the United Kingdom, Norway, Ireland, and the Netherlands. As a robustness check the authors alternatively use institutional quality measures independent of the World Bank and find the same

pattern of selectivity. They also find that policy selectivity is a new phenomenon: in the 1984–89 period, aid overall was allocated indiscriminately without any consideration to the quality of governance, whereas in the 1990s there was a clear relationship between aid and governance (institutions and policies). This increasing selectivity of aid is good news for aid effectiveness. The bad news is that the aid agencies that the authors survey vary greatly in size. Some donors that are largest in absolute size, such as France and the United States, are not particularly selective. Japan comes in high on the policy selectivity index but far down on the poverty selectivity index, reflecting its pattern of giving large amounts of aid in Asia to countries that are well governed but in many cases not poor.

This paper—a product of Development Policy, Development Economics Senior Vice Presidency—is part of a larger effort in the Bank to examine aid effectiveness. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Victoria Levin, room MC4-396, telephone 202-473-6368, fax 202-522-0906, email address [vlevin@worldbank.org](mailto:vlevin@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. David Dollar may be contacted at [ddollar@worldbank.org](mailto:ddollar@worldbank.org). (33 pages)

### 3300. The Labor Market Effects of Foreign-owned Firms

Rita Almeida  
(May 2004)

Foreign firms often have a more educated workforce and pay higher wages than domestic firms. This does not necessarily imply that foreign ownership translates into higher demand for educated workers or higher wages, since foreign investment may be guided by unobservable firm characteristics correlated with the demand for educated workers or wages. Almeida examines foreign acquisitions of domestic firms in Portugal in the 1990s and finds small changes in the workforce skill composition and wages following acquisition. Foreign investors “cherry pick” domestic firms that are already very similar to the group of existing foreign firms.

This paper—a product of Investment Climate, Development Research Group—

is part of a larger effort in the group to understand the determinants of productive investment. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Anna Bonfield, room MC3-354, telephone 202-473-1248, fax 202-522-3518, email address [abonfield@worldbank.org](mailto:abonfield@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at [ralmeida@worldbank.org](mailto:ralmeida@worldbank.org). (33 pages)

### 3301. Which Doctor? Combining Vignettes and Item Response to Measure Doctor Quality

Jishnu Das and Jeffrey Hammer  
(May 2004)

Das and Hammer develop a method in which vignettes—a battery of questions for hypothetical cases—are evaluated with item response theory to create a metric for doctor quality. The method allows a simultaneous estimation of quality and validation of the test instrument that can be used for further refinements. The authors apply the method to a sample of medical practitioners in Delhi, India. The method gives plausible results, rationalizes different perceptions of quality in the public and private sectors, and pinpoints several serious problems with health care delivery in urban India. The findings confirm, for instance, that the quality of private providers located in poorer areas of the city is significantly lower than those in richer neighborhoods. Surprisingly, similar results hold for providers in the public sector, with important implications for inequities in the availability of health care.

This paper—a product of Public Services, Development Research Group—is part of a larger effort in the group to understand the delivery of basic services by the government and private sector in low-income countries. The study was funded by the Bank's Research Support Budget under the research project “Health Care Providers and Markets in Delhi. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Hedy Sladovich, room MC3-607, telephone 202-473-7698, fax 202-522-1156, email address [hsladovich@worldbank.org](mailto:hsladovich@worldbank.org). Policy Research Working Papers are also posted

on the Web at <http://econ.worldbank.org>. The authors may be contacted at [jdass1@worldbank.org](mailto:jdass1@worldbank.org) or [jhammer@worldbank.org](mailto:jhammer@worldbank.org). (36 pages)

### 3302. Convergence, Dynamics, and Geography of Economic Growth: The Case of Municipalities in Rio Grande do Norte, Brazil

Dorte Verner and Edinaldo Tebaldi  
(May 2004)

Analyses of municipal GDP growth in Rio Grande do Norte in the Northeast of Brazil during 1970–96 reveal that the cross-section dispersion of per capita income increased over time. Although the analysis indicates some spatial dependence in income, it is small and has a downward trend, indicating that the growth path is only weakly determined by geographical links in Rio Grande do Norte. Moreover, dynamic analyses based on the Markov chain transition matrix show that the probability of a municipality moving from a poor income class to a rich class is very small and vice-versa. Municipalities located in the middle-income class have high mobility, but there is no strong evidence indicating direction. Public policy should include assisting the rural families by providing them education and training that increases their opportunities for employment. There should also be policies to assist poor and unskilled migrants to integrate fully into the modern economy in the urban areas through skill development training and education.

This paper—a product of the Social Development Family Sector Unit, Latin America and the Caribbean Region—is part of a larger effort in the region to reduce poverty. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Grissel Prieto, room I6-226, telephone 202-473-6346, fax 202-676-0199, email address [gprieto@worldbank.org](mailto:gprieto@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. Dorte Verner may be contacted at [dverner@worldbank.org](mailto:dverner@worldbank.org). (22 pages)



### 3303. Can the Distributional Impacts of Macroeconomic Shocks Be Predicted? A Comparison of the Performance of Macro-Micro Models with Historical Data for Brazil

Francisco H. G. Ferreira, Phillippe G. Leite, Luiz A. Pereira da Silva, and Paulo Picchetti (May 2004)

What was the impact of Brazil's 1998–99 currency crisis—which resulted in a change of exchange rate regime and a large real devaluation—on the occupational structure of the labor force and the distribution of incomes? Would it have been possible to predict such effects ahead of the crisis? The authors present an integrated macro-micro model of the Brazilian economy in 1998. The model consists of an applied general equilibrium macroeconomic component, connected through a set of linkage aggregate variables to a microeconomic model of household incomes. The authors use this framework to predict the employment and distributional consequences of the 1999 Brazilian currency crisis, based on 1998 household survey data. They then test the predictive performance of the model by comparing its simulated results with the actual household survey data observed in 1999. In addition to the fully integrated macro-micro model, the authors also test the performances of the microeconomic model on its own, and of a “representative household groups” approach. They find that the integrated macro-micro econometric model, while still inaccurate on many dimensions, can actually predict the broad pattern of the incidence of changes in household incomes across the distribution reasonably well, and much better than the alternative approaches. The authors conclude that further experimentation with these tools might be of considerable potential usefulness to policymakers.

This paper—a joint product of the Poverty Team, Development Research Group, and the Office of the Senior Vice President and Chief Economist, Development Economics—is part of a larger effort in the Bank to understand the microeconomic consequences of macroeconomic phenomena. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Patricia Sader, room MC3-556, telephone 202-473-3902, fax 202-522-1151, email address psader@worldbank.org. Policy

Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at fferreira@worldbank.org, pleite@worldbank.org, lpereiradasilva@worldbank.org, or picchetti@fipe.com. (41 pages)

### 3304. The RMSM-X+P: A Minimal Poverty Module for the RMSM-X

Derek H. C. Chen, Thilak Ranaweera, and Andriy Storozhuk (May 2004)

The authors present a new tool, the RMSM-X+P, which essentially consists of a RMSM-X model with an additional module for poverty and social indicators. This linkage facilitates the analysis of the impact of various macroeconomic shocks on a selected set of key social indicators. Poverty analysis is performed by the use of a poverty equation (which is estimated using pooled data for a group of low-income countries) that links the incidence of poverty to inflation, the literacy rate, real GDP per capita, the degree of trade openness, and income inequality. Similarly, the authors analyze the effects of various macroeconomic shocks on education and health with the aid of equations for education and health. This new tool allows the user to address a limited number of policy issues. However, it does possess several merits, perhaps the most substantial being that it permits the users to move beyond approaches that focus on the partial correlation between growth and poverty in discussions of poverty reduction.

This paper—a joint product of the Global Knowledge and Learning Division, World Bank Institute; the Development Data Group; and the Poverty Reduction and Economic Management Sector Unit, Europe and Central Asia Region—is part of a larger effort in the Bank to promote economic and human development by reducing poverty and increasing the levels of education and health. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Faythe Calandra, room J2-267, telephone 202-473-6440, fax 202-522-1492, email address fcalandra@worldbank.org. Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at dchen2@worldbank.org, tranaweera@worldbank.org, or astorozhuk@worldbank.org. (45 pages)

### 3305. Do Stronger Intellectual Property Rights Increase International Technology Transfer? Empirical Evidence from U.S. Firm-Level Panel Data

Lee G. Branstetter, Raymond Fisman, and C. Fritz Foley (May 2004)

One of the alleged benefits of the recent global movement to strengthen intellectual property rights (IPRs) is that such reforms accelerate transfers of technology between countries. Branstetter, Fisman, and Foley examine how technology transfer among U.S. multinational firms changes in response to a series of IPR reforms undertaken by 12 countries over the 1982–99 period. Their analysis of detailed firm-level data reveal that royalty payments for intangibles transferred to affiliates increase at the time of reforms, as do affiliate research and development (R&D) expenditures and total levels of foreign patent applications. Increases in royalty payments and R&D expenditures are more than 20 percent larger among affiliates of parent companies that use U.S. patents more extensively prior to reform and therefore are expected to value IPR reform most.

This paper—a product of Trade, Development Research Group—is part of a larger effort in the group to understand the global impact of stronger intellectual property rights. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Paulina Flewitt, room MC3-333, telephone 202-473-2474, fax 202-522-1159, email address pflewitt@worldbank.org. Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at lgb2001@columbia.edu, rf250@columbia.edu, or ffoley@umich.edu. (49 pages)

### 3306. Export Commodity Production and Broad-based Rural Development: Coffee and Cocoa in the Dominican Republic

Paul B. Siegel and Jeff Alwang (May 2004)

An estimated 80,000–100,00 Dominican farmers produce coffee and cocoa, nearly

40 percent of all agricultural producers. The sectors also provide employment for tens of thousands of field laborers and persons employed in linked economic activities. The majority of coffee and cocoa producers are small-scale and most are located in environmentally sensitive watersheds. Recent trends in international commodity markets have challenged the survival of both sectors. Production is characterized by low yields and uneven quality, while periodic hurricanes have contributed to a lackluster and unstable record of output and exports. Despite these conditions, most experts acknowledge the fact that appropriate agro-ecological conditions exist in the Dominican Republic for the production of high-quality coffee and cocoa. To be competitive and sustainable, some changes must take place in the coffee and cocoa sectors. The objective of this study is to provide an overview of the coffee and cocoa sectors, identify major problems, and suggest possible strategies to deal with these problems. The authors conclude that if the objectives of the government are poverty reduction, environmental protection, and overall well-being of rural society, it is critical to move beyond a commodity-specific approach to a broader rural development focus on households, regions, and environments where coffee and cocoa are currently being grown.

This paper—a joint product of the Agriculture and Rural Development Department and the Rural Development Family, Latin America and the Caribbean Region—is part of a larger effort in the Bank to examine export commodity sectors in the broader context of sustainable rural development. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Panos Varangis, room MC5-514, telephone 202-473-3852, email address [pvarangis@worldbank.org](mailto:pvarangis@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [psiegel@worldbank.org](mailto:psiegel@worldbank.org) or [alwangj@vt.edu](mailto:alwangj@vt.edu). (87 pages)

### 3307. Latvia's Macroeconomic Options in the Medium Term: Fiscal and Monetary Challenges of European Union Membership

Célestin Monga  
(May 2004)

Latvia's experience over the past decade shows that economic growth and real convergence can no longer be assumed to be exogenously driven processes determined by given technological improvements and relatively higher factor returns. Instead, it is an endogenously driven process led by many variables, including policy variables. European Union membership clearly brings enormous economic benefits to Latvia. However, it also brings important challenges on the macroeconomic front, especially prior to the adoption of the euro. Substantial progress has been made toward fiscal consolidation since the mid-1990s but several risks remain. Given the facts that domestic demand remains buoyant and that Latvia will have to accommodate the expenditure commitments associated with NATO and EU membership while simultaneously aiming to fulfill the medium-term goal of a balanced budget, a more prudent fiscal policy should be the main short-term policy objective. The authorities should therefore reassess their current medium-term budget framework and strengthen their fiscal rules so that off-budget spending is eliminated and controls over spending ministries and local government finances are reinforced. They should also rethink any further tax reductions until a clear strategy is designed for compensating for projected losses in government revenues. Monetary policy can contribute to sustainable growth and job creation in Latvia in the medium and long term by providing an environment for price stability. It will have to be complemented by further microeconomic reforms and prudent wage developments aligned with productivity growth.

This paper—a product of the Poverty Reduction and Economic Management Sector Unit, Europe and Central Asia Region—is part of a larger effort in the region to contribute to macroeconomic analysis in the Baltic countries. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Mismake Galatis, room H4-312, telephone 202-473-1177, fax 202-614-1499, email address

[mgalatis@worldbank.org](mailto:mgalatis@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at [cmonga@worldbank.org](mailto:cmonga@worldbank.org). (36 pages)

### 3308. The Regulatory and Supervisory Framework for Fixed Income Markets in Europe

Hubert Grignon Dumoulin and Mogens Kruse  
(May 2004)

Dumoulin and Kruse look at the development and regulation of fixed income securities markets in Europe. Fixed income securities markets in Europe have historically been characterized by a number of national markets that were interconnected by way of foreign exchange markets. They are presently undergoing major changes in size, infrastructure, and regulation. The authors describe the current state of the ongoing European regulatory and supervisory reform and the main drivers behind it. They conclude that European fixed income securities market regulation and infrastructure are not (yet) homogeneous. In some countries fixed income market regulation has been developed after intense political reflections on ways and means of promoting safe and efficient capital markets. In other countries, fixed income market regulation is a product of learning-by-doing (such as ad hoc reflections based on negative market experiences and financial scandals). To illustrate the heterogeneity in the European fixed income markets, the authors include two examples: France as an example of a country from the euro area, and Denmark as an example of a country outside the euro area.

This paper—a product of the Financial Sector Operations and Policy Department—is part of a larger effort in the department to strengthen regulation in emerging securities markets. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Noemi Dacanay, room MC9-702, telephone 202-473-4068, fax 202-522-7105, email address [ndacanay@worldbank.org](mailto:ndacanay@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [Hubert.grignon-dumoulin@cec.eu.int](mailto:Hubert.grignon-dumoulin@cec.eu.int) or [mkr@nationalbanken.dk](mailto:mkr@nationalbanken.dk). (108 pages)



### 3309. Fiscal Responsibility Laws for Subnational Discipline: The Latin American Experience

Steven B. Webb  
(May 2004)

Webb discusses fiscal responsibility laws in Latin America, with special attention to their provisions for fiscal discipline by subnational governments. He discusses why and when such laws might be useful—to help resolve the coordination problem in getting diverse governments to avoid overusing the common national credit market and to help individual governments make a time-consistent commitment for fiscal prudence. The author examines the cases of Argentina, Brazil, Colombia, and Peru, as well as the case of Mexico where other types of laws and regulations aim to achieve the same objectives of solidifying incentives for fiscal discipline at all levels of government. Fiscal responsibility laws are found to be useful in some cases, although the experience is not long enough to be certain, but they are clearly not necessary in every case, nor always sufficient to assure fiscal stability.

This paper—a product of the Economic Policy Sector Unit, Latin America and the Caribbean Region—is part of a larger effort in the region to understand the dynamics of fiscal policy in a federal context. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Patricia Holt, room I8-168, telephone 202-473-7707, fax 202-522-2119, email address [pholt@worldbank.org](mailto:pholt@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at [swebb@worldbank.org](mailto:swebb@worldbank.org). (19 pages)

### 3310. Bundling Services and Household Welfare in Developing Countries: The Case of Peru

Alberto Chong, Jesko Hentschel,  
and Jaime Saavedra  
(May 2004)

Using panel data for Peru for 1994–2000, Chong, Hentschel, and Saavedra find that when households receive two or more services jointly, the welfare increases, as measured by changes in consumption, are larger than when services are provided

separately. The increases appear to be more than proportional, as F-tests on the coefficients of the corresponding regressors confirm. Thus, the authors find that bundling services may help realize welfare effects.

This paper—a joint product of the Human Development Department and the Poverty Sector Unit, Latin America and the Caribbean Region, in cooperation with the research department of the Inter-American Development Bank—is part of a larger effort to understand the microeconomic determinants of household welfare changes in developing countries. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Marta Cervantes-Miguel, room I8-095, telephone 202-473-7794, email address [mcervantes@worldbank.org](mailto:mcervantes@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [albertoch@iadb.org](mailto:albertoch@iadb.org), [jhentschel@worldbank.org](mailto:jhentschel@worldbank.org), or [jsaavedra@worldbank.org](mailto:jsaavedra@worldbank.org). (8 pages)

### 3311. Property Rights Institutions and Investment

Jahangir Saleh  
(May 2004)

Saleh examines the channels through which alternative property rights institutions affect investment. These institutions are defined by a society's enforced laws, regulations, governance mechanisms, and norms concerning the use of resources. The author uses a transaction cost framework to analyze the incentive impact of various types of property rights, liability rules, and rules regarding contracts. He uses this framework to discuss the legal and cultural conditions necessary for the formation of productivity-enhancing organizations and the proper role of government in providing the infrastructure for private investment. The author also examines the role of cultural and religious norms in determining the economic effectiveness of legal systems, with a focus on Islamic countries. Finally, he evaluates empirical approaches used to discover the specific ways property rights structures affect investment and growth.

This paper—a product of the Office of the Senior Vice President and Chief Economist, Development Economics—is part of a larger effort in the Bank to un-

derstand the institutional requirements for improving investment climate in developing countries. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Shunalini Sarkar, room MC4-347, telephone 202-473-3028, fax 202-522-1158, email address [ssarkar2@worldbank.org](mailto:ssarkar2@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at [jsaleh@osprey.smc.edu](mailto:jsaleh@osprey.smc.edu). (46 pages)

### 3312. Trade Policy Analysis in the Presence of Duty Drawbacks

Elena Ianchovichina  
(May 2004)

Duty drawback schemes, which typically involve a combination of duty rebates and exemptions, are a feature of many countries' trade regimes. They are used in highly protected developing economies as a means of providing exporters with imported inputs at world prices, thus increasing their competitiveness, while maintaining the protection on the rest of the economy. In China, duty exemptions have been central to the process of trade reform and have led to a tremendous increase in processed exports using imported materials. Despite the widespread use and importance of duty drawbacks, these "new trade liberalization" instruments have been given relatively little attention in empirical multilateral trade liberalization studies. Ianchovichina presents an empirical multi-region general equilibrium model, in which the effects of policy reform are differentiated based on the trade orientation of the firms. The model is useful for analyzing trade liberalization in the presence of duty drawbacks, assessing whether countries should introduce or abolish these types of arrangements, and evaluating the impact of improved duty drawback system administration. The author's analysis shows that failure to account for duty exemptions in the case of China's recent WTO accession will overstate the increase in China's trade flows by 40 percent, welfare by 15 percent, and exports of selected sectors by as much as 90 percent. The magnitude of the bias depends on the level of pre-intervention tariffs and the size of tariff cuts—the larger the initial distortions and tariff reductions, the larger the bias when

duty drawbacks are ignored. The bias in the estimates of China's real GDP, trade flows, and welfare changes due to WTO accession increases more than three times when China's pre-intervention tariffs are raised from their 1997 levels to the much higher 1995 levels. These results suggest that trade liberalization studies—focusing on economies in which protection is high, import concessions play an important role, and planned tariff cuts are deep—must treat duty drawbacks explicitly to avoid serious errors in their estimates of sectoral output, trade flows, and welfare changes.

This paper—a product of the Economic Policy Division, Poverty Reduction and Economic Management Network—is part of a larger effort in the network to study tax policy, competitiveness, and growth. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Sarah Lipscomb, room MC4-404, telephone 202-458-7266, fax 202-522-2530, email address [economicpolicy@worldbank.org](mailto:economicpolicy@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at [eianchovichina@worldbank.org](mailto:eianchovichina@worldbank.org). (36 pages)

### 3313. On the Unequal Inequality of Poor Communities

Chris Elbers, Peter F. Lanjouw,  
Johan A. Mistiaen, Berk Özler,  
and Ken Simler  
(May 2004)

Important differences exist between communities with respect to their needs, capacities, and circumstances. As central governments are not able to discern these differences fully, they seek to achieve their policy objectives by relying on decentralized mechanisms that use local information. However, household and individual characteristics *within* communities can also vary substantially. A growing theoretical literature suggests that inequality within communities can influence policy outcomes, and that this influence could be harmful or helpful, depending on the circumstances. Empirical investigations into the impact of inequality have, to date, largely been held back by a lack of systematic evidence on community-level inequality. The authors use household survey and population census data to estimate per

capita consumption inequality within communities in three developing countries: Ecuador, Madagascar, and Mozambique. Communities are found to vary markedly from one another in terms of the degree of inequality they exhibit. The authors also show that there should be no presumption that inequality is less severe in poor communities. They argue that the kind of community-level inequality estimates generated in this paper can be used in designing and evaluating decentralized antipoverty programs.

This paper—a product of the Poverty Team, Development Research Group—is part of a larger effort in the group to develop tools for the analysis of poverty and income distribution. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Patricia Sader, room MC3-556, telephone 202-473-3902, fax 202-522-1153, email address [psader@worldbank.org](mailto:psader@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [planjouw@worldbank.org](mailto:planjouw@worldbank.org), [jmistiaen@worldbank.org](mailto:jmistiaen@worldbank.org), or [bozler@worldbank.org](mailto:bozler@worldbank.org). (35 pages)

### 3314. The Case for Tradable Remedies in WTO Dispute Settlement

Kyle Bagwell, Petros C. Mavroidis,  
and Robert W. Staiger  
(May 2004)

In response to concerns over the efficacy of the WTO dispute settlement system, especially in regard to its use by developing countries, Mexico has tabled a proposal to introduce tradable remedies within the Dispute Settlement Understanding. The idea is that a country that has won cause before the WTO, and who is facing non-implementation by the author of the illegal act but feels that its own capacity to exercise its right to impose countermeasures is unlikely to lead to compliance, can auction off that right. The attractiveness of this idea is that it offers an additional possibility to injured WTO members to get something from the dispute settlement mechanism without putting into question the legal nature of the existing contract, that is, the predominantly decentralized system of enforcement in the WTO. Examining all disputes brought to the WTO since

its inception, the authors find some support for Mexico's perception that developing countries face a practical problem when they attempt to carry through with effective retaliation within the WTO system. And based on the formal results of Bagwell, Mavroidis, and Staiger (2003), they describe arguments that lend some support to the efficacy of Mexico's proposed solution from the perspective of formal economic theory.

This paper—a product of Trade, Development Research Group—is part of a larger effort in the group to promote discussions on the efficacy of the WTO dispute settlement system. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Paulina Flewitt, room MC3-333, telephone 202-473-2724, fax 202-522-1159, email address [pflewitt@worldbank.org](mailto:pflewitt@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [rstaiger@facstaff.wisc.edu](mailto:rstaiger@facstaff.wisc.edu), [pmavro@law.columbia.edu](mailto:pmavro@law.columbia.edu), or [kwb8@columbia.edu](mailto:kwb8@columbia.edu). (52 pages)

### 3315. A Review of the Political Economy of Governance: From Property Rights to Voice

Philip Keefer  
(May 2004)

Keefer reviews progress made in understanding the effects of different dimensions of governance on economic development, and the sources of “good governance.” The term governance has been used to embrace concepts that are heterogeneous both with respect to their effects on economic development and their genesis. Future progress in developing policy responses to “bad governance” will depend on separately examining these heterogeneous elements—the security of property rights, the quality of bureaucratic performance, corruption, voice, and accountability. Future progress will also depend on explicitly linking problems of governance to the overarching political environment and the incentives of governments to correct those problems.

This paper—a product of Investment Climate, Development Research Group—is part of a larger effort in the group to understand the impact of political institutions on development. Copies of the paper are available free from the World

Bank, 1818 H Street NW, Washington, DC 20433. Please contact Paulina Sintim-Aboagye, room MC3-422, telephone 202-473-8526, fax 202-522-1155, email address [psintimaboagye@worldbank.org](mailto:psintimaboagye@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at [pkiefer@worldbank.org](mailto:pkiefer@worldbank.org). (48 pages)

### 3316. Homeownership, Community Interactions, and Segregation

Karla Hoff and Arijit Sen  
(May 2004)

Hoff and Sen consider a multi-community city where community quality is linked to residents' civic efforts, such as being proactive in preventing crime and ensuring the quality of publicly provided goods. Homeownership increases incentives for such efforts, but credit market imperfections force the poor to rent. Within-community externalities can lead to segregated cities—with the rich living with the rich in healthy homeowner communities, and the poor living with the poor in dysfunctional renter communities. The pattern of tenure segregation across communities in the United States accords well with the study's prediction. The authors analyze alternative tax-subsidy policies to alleviate inefficiencies in the housing market and identify the winners and losers under such policies.

This paper—a product of Investment Climate, Development Research Group—is part of a larger effort in the group to understand how external agents can best complement the strategies of the poor to improve the responsiveness of local government and to strengthen community institutions. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Anna Bonfield, room MC3-354, telephone 202-473-1248, fax 202-522-1152, email address [abonfield@worldbank.org](mailto:abonfield@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [khoff@worldbank.org](mailto:khoff@worldbank.org) or [senarijit@vsnl.net](mailto:senarijit@vsnl.net). (34 pages)

### 3317. Business Environment and the Incorporation Decision

Aslı Demirgüç-Kunt, Inessa Love, and Vojislav Maksimovic  
(May 2004)

Using firm-level data from 52 countries, Demirgüç-Kunt, Love, and Maksimovic investigate how a country's institutions and business environment affect firms' organizational choices and the effects of organizational form on access to finance and growth. They find that businesses are more likely to choose the corporate form in countries with developed financial sectors and efficient legal systems, strong shareholder and creditor rights, low regulatory burdens and corporate taxes, and efficient bankruptcy processes. Corporations report fewer financing, legal, and regulatory obstacles than unincorporated firms, and this advantage is greater in countries with more developed institutions and favorable business environments. The authors find some evidence of higher growth of incorporated businesses in countries with good financial and legal institutions.

This paper—a product of Finance, Development Research Group—is part of a larger effort in the group to understand firm entry. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Agnes Yaptenco, room MC3-439, telephone 202-473-1823, fax 202-522-1155, email address [ayaptenco@worldbank.org](mailto:ayaptenco@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [ademirguckunt@worldbank.org](mailto:ademirguckunt@worldbank.org) or [ilove@worldbank.org](mailto:ilove@worldbank.org). (37 pages)

### 3318. Location and Welfare in Cities: Impacts of Policy Interventions on the Urban Poor

Mudit Kapoor, Somik V. Lall, Mattias K. A. Lundberg, and Zmarak Shalizi  
(May 2004)

Informal settlements are an integral part of the urban landscape in developing countries. These settlements are widely distributed within cities, including central business centers and peripheral areas with environment hazards. In most cases, residents of these settlements do not have

access to basic public services and amenities. In this paper, the authors examine the impact of interventions, such as upgrading basic services and resettlement policies, on the welfare of residents of these informal settlements, who are typically the urban poor. To examine these interventions, they estimate models of residential location choice and allow households to be sensitive to commuting costs to work, demand for public services, and preferences for community composition. The authors' empirical analysis is based on recently collected survey data from Pune, India, and shows that poor households prefer to live close to work and in communities that consist of people sharing common socio-demographic characteristics. From the perspective of households living in informal settlements, upgrading settlements in the original place is welfare enhancing. If a household must be relocated, it greatly prefers to be moved to a community that resembles its current community.

This paper—a product of Infrastructure and Environment, Development Research Group—is part of a larger effort in the group to understand the impact of spatial policy interventions on welfare and livelihoods of the urban poor. The study and data collection have been co-funded by the Research Support Budget under the research project "Urbanization and Quality of Life" and by the U.K. DFID's Urban Knowledge Generation and Toolkits program. Copies of this paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Viktor Soukhanov, room MC2-523, telephone 202-473-5721, fax 202-522-3230, email address [vsoukhanov@worldbank.org](mailto:vsoukhanov@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors can be contacted at [mkapoor@worldbank.org](mailto:mkapoor@worldbank.org), [slall1@worldbank.org](mailto:slall1@worldbank.org), [mlundberg@worldbank.org](mailto:mlundberg@worldbank.org), or [zshalizi@worldbank.org](mailto:zshalizi@worldbank.org). (33 pages)

### 3319. Financial Development and Growth in the Short and Long Run

Raymond Fisman and Inessa Love  
(May 2004)

Fisman and Love analyze the relationship between financial development and inter-industry resource allocation in the short and long run. They suggest that in the long

run, economies with high rates of financial development will devote relatively more resources to industries with a "natural" reliance on outside finance due to a comparative advantage in these industries. By contrast, in the short run the authors argue that financial development facilitates the reallocation of resources to industries with good growth opportunities, regardless of their reliance on outside finance. To test these predictions, they use a measure of industry-level "technological" financial dependence based on the earlier work of Rajan and Zingales (1998) and develop new proxies for shocks to (short-run) industry growth opportunities. The authors find differential effects of these measures on industry growth and composition in countries with different levels of financial development. They obtain results that are consistent with financially developed economies specializing in "financially dependent" industries in the long run, and allocating resources to industries with high growth opportunities in the short run.

This paper—a product of Finance, Development Research Group—is part of a larger effort in the group to study finance and growth. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Agnes Yaptenco, room MC3-439, telephone 202-473-1823, fax 202-522-1155, email address [ayaptenco@worldbank.org](mailto:ayaptenco@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [rf250@columbia.edu](mailto:rf250@columbia.edu) or [ilove@worldbank.org](mailto:ilove@worldbank.org). (27 pages)

### 3320. Country Portfolios

Aart Kraay, Norman Loayza,  
Luis Servén, and Jaime Ventura  
(June 2004)

Capital flows to developing countries are small and mostly take the form of loans rather than direct foreign investment. Kraay, Loayza, and Servén build a simple model of North-South capital flows that highlights the interplay between diminishing returns, production risk, and sovereign risk. The model generates a set of country portfolios and a world distribution of capital stocks that resemble those in the data.

This paper—a product of Investment Climate, Development Research Group—

is part of a larger effort in the group to study international capital flows. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Anna Bonfield, room MC3-354, telephone 202-473-1248, fax 202-522-3518, email address [abonfield@worldbank.org](mailto:abonfield@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [akraay@worldbank.org](mailto:akraay@worldbank.org), [nloayza@worldbank.org](mailto:nloayza@worldbank.org), or [lserven@worldbank.org](mailto:lserven@worldbank.org). (42 pages)

### 3321. Education and its Poverty-Reducing Effects: The Case of Paraíba, Brazil

Dorte Verner  
(June 2004)

Breaking the intergenerational transmission of poverty requires far-reaching actions in the education sector. Widespread poverty affects both students' performance and their availability to attend school. Low-quality education leads to low income, which in turn perpetuates poverty. Furthermore, low levels of education affect growth through low labor productivity.

Although Paraíba, Brazil suffers from a history of educational neglect, the state has recently made significant gains in primary enrollment; 93 percent of the children aged 7-14 are enrolled in school. However, 30 percent of the population aged 15 and older are illiterate and, unfortunately, it is not only the older generations that cannot read and write: 15 percent of children aged 10 to 15 are illiterate. However, substantial achievements in education have helped the extremely poor segment of population as much as expected. Probit analyses reveal that education attainment is the single most important poverty-reducing factor. All levels of education from primary to tertiary are significant and negatively associated with the probability of being poor.

This paper—a product of the Social Development Family Sector Unit, Latin America and the Caribbean Region—is part of a larger effort in the region to reduce poverty and increase social inclusion. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Grissel Prieto, room I6-226, telephone 202-473-6346, fax 202-676-0199, email

address [gprieto@worldbank.org](mailto:gprieto@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at [dverner@worldbank.org](mailto:dverner@worldbank.org). (49 pages)

### 3322. Tango with the Gringo: The Hard Peg and Real Misalignment in Argentina

Enrique Alberola, Humberto López,  
and Luis Servén  
(June 2004)

Between 1990 and 2001 the Argentine peso appreciated by 80 percent in real terms, and its overvaluation has been singled out as one of the main suspects in the debate on the causes of the Argentina collapse of late 2001. Alberola, López, and Servén assess the degree of real misalignment in Argentina over the convertibility period using a model in which the equilibrium real exchange rate is defined as the value consistent with (1) a balance of payments position where any current account imbalance is financed by a sustainable flow of international capital (external equilibrium), and (2) traded/nontraded sector productivity differentials (internal equilibrium). Empirical implementation of the model suggests that the initial real appreciation of the peso, between 1990 and 1993, was consistent with the productivity increases that Argentina enjoyed following the stabilization of the economy after the hyperinflation of the late 1980s. But after 1996 a widening gap opened between the observed real exchange rate and that consistent with a sustainable net foreign asset position. The authors' estimates indicate that in 2001 the peso was overvalued by over 50 percent. The model allows them to assess how much of the overvaluation resulted from Argentina's inadequate choice of anchor currency and how much from a divergence of fundamentals between the United States and Argentina, ultimately due to the maintenance of policies inconsistent with the peg. The authors find that both factors played a role in the overvaluation accumulated between 1977 and 2001 that preceded the collapse of the convertibility regime.

This paper—a product of the Economic Policy Sector Unit and the Office of the Regional Chief Economist, Latin America and the Caribbean Region—is part of a larger effort in the region to understand

the causes of macroeconomic crises. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Patricia Soto, room I8-018, telephone 202-473-7892, fax 202-522-7528, email address [psoto@worldbank.org](mailto:psoto@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [hlopez@worldbank.org](mailto:hlopez@worldbank.org) or [lserven@worldbank.org](mailto:lserven@worldbank.org). (28 pages)

### 3323. Investment Climate and International Integration

David Dollar, Mary Hallward-Driemeier, and Taye Mengistae  
(June 2004)

Drawing on recently completed firm-level surveys in Bangladesh, Brazil, China, Honduras, India, Nicaragua, Pakistan, and Peru, Dollar, Hallward-Driemeier, and Mengistae investigate the relationship between investment climate and international integration. These standardized surveys of large, random samples of firms in common sectors reveal how firms experience bottlenecks and delays in hard infrastructure such as power and telecommunications, as well as in soft infrastructure such as customs administration. The authors focus primarily on measures of the time or monetary cost of different bottlenecks (such as days to clear goods through customs, days to get a telephone line, and sales lost to power outages). For many of these costs, the obstacles are lower in China than in the South Asian or Latin American countries. There is also systematic variation across cities within countries. The authors estimate a probit function for the probability that a randomly chosen firm is foreign-invested and a separate probit for the probability that a randomly chosen firm is an exporter. These measures of international integration are higher where investment climate is favorable. For locations to take advantage of opportunities in the international market, they need good infrastructure and a sound regulatory environment. The interaction of openness and sound investment climate creates a good environment for investment and production. This paper helps explain why China has been so successful over the past decade, both in terms of integration and of rapid growth, while other countries have had varied success.

This paper—a joint product of the Office of the Senior Vice President and Chief Economist, Development Economics, and Investment Climate, Development Research Group—is part of a larger effort in the Bank to understand better the role of business environment in economic performance. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Anna Bonfield, room MC3-354, telephone 202-473-1248, fax 202-522-3518, email address [abonfield@worldbank.org](mailto:abonfield@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [ddollar@worldbank.org](mailto:ddollar@worldbank.org), [mhallward@worldbank.org](mailto:mhallward@worldbank.org), or [tmengistae@worldbank.org](mailto:tmengistae@worldbank.org). (35 pages)

### 3324. Health Care Decisions as a Family Matter: Intrahousehold Education Externalities and the Utilization of Health Services

Magnus Lindelöw  
(June 2004)

Lindelöw is concerned with the role of education as a determinant of health care choices. His central premise is that utilization of health services is determined not solely by an individual's own education, but rather by a notion of *effective education*, which incorporates the educational attainment of other household members. The author sets out a general framework for representing intrahousehold education externalities, and proposes a number of specific hypotheses concerning the way in which the education of different household members affects health care choices. He tests these hypotheses on data from Mozambique, focusing on maternity services and child immunizations. The author draws five major conclusions from the analysis. First, while maternal education seems to be the education variable of primary importance for the health care choices under consideration, the education of other household members has a significant and sometimes large effect. Second, his analysis suggests that while the education of the person (nonspouse) in the household with the highest-level education is important, the level of education of additional household members does not have an impact on health care choices. Third, the data provide no evidence of a gender difference in education externali-

ties. Fourth, the author examines the merits of two alternative representations of the education externality, but is unable to conclude unambiguously in favor of one specification over the other. Finally, although the analysis highlights the importance of both education and a number of other explanatory variables in understanding health care choices, spatial fixed effects remain highly significant.

This paper—a product of Public Services, Development Research Group—is part of a larger effort in the group to understand the determinants of health service use in households. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Hedy Sladovich, room MC3-607, telephone 202-473-7698, fax 202-522-1154, email address [hsladovich@worldbank.org](mailto:hsladovich@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at [mlindelow@worldbank.org](mailto:mlindelow@worldbank.org). (29 pages)

### 3325. The Quality of Foreign Aid Country Selectivity or Donors Incentives?

Waly Wane  
(June 2004)

Wane investigates the determinants of foreign aid quality. He shows that design effects are a crucial component of quality. He thus establishes that donors have an impact on the quality of the foreign assistance they provide. The author also shows both theoretically and empirically that the quality of aid is endogenous to the relationship between the donor agency and the recipient government. Highly capable and accountable governments accept only well-designed projects, whereas governments with low accountability may accept poor quality projects either because they are unable to assess the worth of the projects or they will benefit personally.

This paper—a product of Public Services, Development Research Group—is part of a larger effort in the group to explore the determinants of aid effectiveness. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Hedy Sladovich, room MC3-607, telephone 202-473-7698, fax 202-522-1154, email address [hsladovich@worldbank.org](mailto:hsladovich@worldbank.org). Policy Research Working Papers are also

posted on the Web at <http://econ.worldbank.org>. The author may be contacted at [wwane@worldbank.org](mailto:wwane@worldbank.org). (33 pages)

### 3326. Toward an Understanding of Household Vulnerability in Rural Kenya

Luc J. Christiaensen and Kalanidhi Subbarao  
(June 2004)

Considerations of risk and vulnerability are key to understanding the dynamics of poverty. Christiaensen and Subbarao conceive vulnerability as expected poverty and illustrate a methodology to empirically assess household vulnerability using pseudo panel data derived from repeated cross sections augmented with historical information on shocks. Application of the methodology to data from rural Kenya shows that in 1994 rural households faced on average a 40 percent chance of becoming poor in the future. Households in arid areas that experience large rainfall volatility appear more vulnerable than those in non-arid areas, where malaria emerges as a key risk factor. Idiosyncratic shocks also cause non-negligible consumption volatility. Possession of cattle and sheep and goats appears ineffective in protecting consumption against covariant shocks, though sheep and goats help reduce the effect of idiosyncratic shocks, especially in arid zones. Of the policy instruments simulated, interventions directed at reducing the incidence of malaria, promoting adult literacy, and improving market accessibility hold most promise to reduce vulnerability.

This paper—a product of the Poverty Reduction and Economic Management 2, Africa Technical Families—is part of a larger effort in the region to integrate household vulnerability issues in the policy dialogue. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Patrick Mamboleo, room J10-274, telephone 202-473-4921, fax 202-614-0759, email address [pmamboleo@worldbank.org](mailto:pmamboleo@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [christiaensen@worldbank.org](mailto:christiaensen@worldbank.org) or [ksubbarao@worldbank.org](mailto:ksubbarao@worldbank.org). (43 pages)

### 3327. A Duration Analysis of CONALEP (Mexico's National Technical Professional School)

Gladys López-Acevedo  
(June 2004)

Mexico's National Technical Professional School (Colegio Nacional de Educación Profesional Técnica, CONALEP) is the largest technical education system in the country. CONALEP serves low-income students at the upper-secondary school level in Mexico. Using graduate tracer surveys from CONALEP, López-Acevedo analyzes the impact of modular courses and reform programs implemented by CONALEP in 1991–92 on CONALEP graduates' labor market outcomes. Results indicate that graduates from the pre-reform program had to search longer for a job compared with those of the post-reform program. Graduates from the post-reform program have 45 percent higher probability of finding a job than those from the pre-reform program. However, the pre-reform program cohorts earned higher hourly wages than those from the post-reform program.

This paper—a product of the Poverty Sector Unit, Latin America and the Caribbean Region—is part of a larger effort in the region to understand the determinants of employment. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Irma Carrasquero, room I4-038, telephone 202-473-3725, email address [icarrasquero@worldbank.org](mailto:icarrasquero@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at [gacevedo@worldbank.org](mailto:gacevedo@worldbank.org). (23 pages)

### 3328. Labor Market Reforms, Growth, and Unemployment in Labor-Exporting Countries in the Middle East and North Africa

Pierre-Richard Agénor, Mustapha K. Nabli, Tarik M. Yousef, and Henning Tarp Jensen  
(June 2004)

Agénor, Nabli, Yousef, and Jensen study the impact of labor market policies on growth and unemployment in labor-exporting countries in the Middle East and North Africa. Their analysis is based on a framework that captures many of the

main features of the labor market in these countries. The authors conduct a variety of policy experiments, including a reduction in payroll taxation, cuts in public sector wages and employment, an increase in employment subsidies, a reduction in trade unions' bargaining power, and a composite reform program. Their key message is that to foster broad-based growth and job creation in the region, labor market reforms must not be viewed in isolation but rather as a component of a comprehensive program of structural reforms.

This paper—a product of the Social and Economic Development Group, Middle East and North Africa Region—is part of a larger effort in the region to understand the impact of labor market reforms on growth and unemployment. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Krisztina Mazo, room H10-102, telephone 202-473-9744, fax 202-477-0432, email address [kmazo@worldbank.org](mailto:kmazo@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [pagenor@worldbank.org](mailto:pagenor@worldbank.org) or [mnabli@worldbank.org](mailto:mnabli@worldbank.org). (64 pages)

### 3329. Sometimes More Equal than Others: How Health Inequalities Depend on the Choice of Welfare Indicator

Magnus Lindelöw  
(June 2004)

A large body of empirical work in recent years has focused on measuring and explaining socioeconomic inequalities in health outcomes and health service use. In any effort to address these questions, analysts must confront the issue of how to measure socioeconomic status. In developing countries, socioeconomic status has typically been measured by per capita consumption or an asset index. Currently, there is only limited information on how the choice of welfare indicators affects the analysis of health inequalities and the incidence of public spending. Lindelöw illustrates the potential sensitivity of the analysis of health-related inequalities to how socioeconomic status is measured. Using data from Mozambique, he focuses on five key health service indicators and tests whether measured inequality (concentration index) in the five health service



variables is different depending on the choice of welfare indicator. He shows that, at least in some contexts, the choice of welfare indicator can have a large and significant impact on measured inequality in health service utilization and on the perceived incidence of public spending. Consequently, one can reach very different conclusions about the "same" issue depending on how socioeconomic status is defined. The results call for more clarity and care in the analysis of health-related inequalities and for explicit recognition of the potential sensitivity of findings to the choice of welfare measure. The results also point to the need for more careful research on how different dimensions of socioeconomic status are related, and on the pathways by which these dimensions affect health-related variables.

This paper—a product of Public Services, Development Research Group—is part of a larger effort in the group to strengthen the methodological underpinnings of equity analysis, and to better understand how the benefits of public spending in service delivery are distributed. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Hedy Sladovich, mail stop MC3-311, telephone 202-473-7698, fax 202-522-1154, email address [hsladovich@worldbank.org](mailto:hsladovich@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at [mlindelov@worldbank.org](mailto:mlindelov@worldbank.org). (24 pages)

### 3330. The Dynamics of School and Work in Rural Bangladesh

José Canals-Cerdá and Cristóbal Ridao-Cano  
(June 2004)

Canals-Cerdá and Ridao-Cano investigate the effect of work on the school progress of rural Bangladeshi children. They specify a dynamic switching model for the sequence of school and work outcomes up to the end of secondary school, where the switching in each school level is determined by the endogenous work history of the child up to that level. This approach allows the authors to evaluate the dynamic effects of work on school progress. They find that work has a negative and sizable effect on school progress and are able to measure this effect for different groups of children. Their results highlight

the relevance of policies aimed at increasing school progress through reductions in child work and the importance of accompanying these policies by efforts to improve the adverse environment that working children face. The authors evaluate the dynamic effects of three policies: compulsory primary schooling, compulsory school entry at age six, and universal access to secondary school. They find that these policies have a sizable effect on school progress and child labor.

This paper—a product of the Human Development Sector Department, East Asia and Pacific Region—is part of a larger effort in the region to better understand the effect of work on schooling. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Dorothy Judkins, room MC8-434, telephone 202-473-6094, fax 202-522-3394, email address [djudkins@worldbank.org](mailto:djudkins@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. Cristóbal Ridao-Cano may be contacted at [cridaocano@worldbank.org](mailto:cridaocano@worldbank.org). (48 pages)

### 3331. Fuelwood Consumption and Participation in Community Forestry in India

Sushenjit Bandyopadhyay and Priya Shyamsundar  
(June 2004)

Decentralized forest management is an important policy issue in India and elsewhere. Yet there are few careful studies of the impacts of community forestry. Band yopadhyay and Shyamsundar try to fill this gap by analyzing National Sample Survey data from 524 villages in five states in India. Their analysis seeks to answer two key questions: (1) Who participates in community forestry and what are the determinants of participation? (2) What is the impact of participation on household fuelwood consumption? The authors find that proximity to forests, leadership, and fuelwood dependence are significant factors in explaining village participation in community forestry. Household participation is strongly correlated with scarcity, a result that has implications for a recent policy to expand community forestry from degraded to less degraded forests. The authors' most important findings are that fuelwood consumption and participation are linked,

and household participation has a significant positive impact on consumption. However, the presence of a village level forestry institution does not have a direct effect.

This paper—a product of the Environment Department—is part of a larger effort in the department to understand the linkages between poverty and the environment. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Alexandra Sears, room MC5-206, telephone 202-458-2819, fax 202-522-1735, email address [asears@worldbank.org](mailto:asears@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [sbandyopadhyay@worldbank.org](mailto:sbandyopadhyay@worldbank.org) or [pshyamsundar@worldbank.org](mailto:pshyamsundar@worldbank.org). (32 pages)

### 3332. Transfer of Technology to Developing Countries: Unilateral and Multilateral Policy Options

Bernard M. Hoekman, Keith E. Maskus, and Kamal Saggi  
(June 2004)

Hoekman, Maskus, and Saggi analyze national and international policy options to encourage the international transfer of technology, distinguishing between four major channels of such transfer: trade in products, trade in knowledge, foreign direct investment, and intranational and international movement of people. They develop a typology of country types and appropriate policy rules of thumb as a guide to both national policymakers and rule making in the World Trade Organization, as policies should differentiate between countries. The authors also develop some rules of thumb for policy intervention. These include:

- Liberal trade policies for all types of countries.
- Temporary encouragement of foreign direct investment inflows for low-income countries.
- Licensing for technical transformation and adaptive investments by local firms to apply technologies.
- Policy options for source economies to encourage international transfer of technology to poor countries, including fiscal incentives, improvement of flows of public-domain technologies with appropriate subsidies, and price differentiation

for exports of intellectual property products.

This paper—a product of the Trade Team, Development Research Group—is part of a larger effort in the group to analyze issues related to the design of special and differential treatment of developing countries in the WTO. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Paulina Flewitt, room MC3-333, telephone 202-473-2724, fax 202-522-1159, email address pflewitt@worldbank.org. Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at bhoekman@worldbank.org, maskus@colorado.edu, or kstaggi@mail.smu.edu. (35 pages)

### 3333. Globalization, Poverty, and Inequality since 1980

David Dollar  
(June 2004)

One of the most contentious issues of globalization is the effect of global economic integration on inequality and poverty. Dollar documents five trends in the modern era of globalization, starting around 1980. Trend 1: Poor country growth rates have accelerated and are higher than rich country growth rates—for the first time in modern history. The developing world economy grew at more than 3.5 percent per capita in the 1990s. Trend 2: The number of poor people in the world has declined significantly—by 375 million people since 1981—the first such decline in history. The share of the developing world population living on less than \$1 a day was cut in half since 1981. Trend 3: Global inequality (among citizens of the world) has declined—modestly—reversing a 200-year-old trend toward higher inequality. Trend 4: There is no general trend toward higher inequality within countries. Trend 5: Wage inequality is rising worldwide (which may seem to contradict trend 4, but it does not because wages are a small part of household income in developing countries, which make up the bulk of the world in terms of countries and population). Furthermore, the trends toward faster growth and poverty reduction are strongest in the developing countries in which there has been the most rapid integration with the global economy, supporting the view that integration has been a positive

force for improving people's lives in the developing world.

This paper—a product of the Development Economics Vice Presidency—is part of a larger effort in the Bank to study globalization and development. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact David Dollar, email address ddollar@worldbank.org. Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. (46 pages)

### 3334. Compensatory Education for Disadvantaged Mexican Students: An Impact Evaluation Using Propensity Score Matching

Joseph Shapiro and Jorge Moreno Trevino  
(June 2004)

Shapiro and Moreno Trevino use propensity score matching to evaluate the effectiveness of CONAFE, a compensatory education program in Mexico, in improving student test scores and lowering repetition and failure rates. They find that CONAFE is most effective in improving primary school math learning and secondary school Spanish learning. Secondary education delivered by way of television to remote communities and bilingual education for indigenous students are both shown to improve student achievement. CONAFE also lowers primary school repetition and failure rates. The authors conclude that this compensatory education program can effectively improve short-term learning results for disadvantaged students, but that improvement varies by the subject of instruction and the demographics of students taught.

This paper—a product of the Human Development Sector Unit, Latin America and the Caribbean Region—is part of a larger effort in the region to evaluate the impact of social programs. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Nelly Vergara, room 17-004, telephone 202-473-0432, fax 202-522-3135, email address nvergara@worldbank.org. Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at jshapiro2@worldbank.org or jmoreno@colmex.mx. (42 pages)

### 3335. Productivity and the Investment Climate: What Matters Most?

Fabiano Bastos and John Nasir  
(June 2004)

Bastos and Nasir explore the links between the investment climate and firm-level productivity and attempt to identify which dimensions of the investment climate matter most for productivity. Their analysis is based on data collected in a recent investment climate survey of garment and food processing firms in five countries in Eastern Europe and Central Asia. The authors use the first principal components of a series of indicators to summarize broad aspects of the investment climate and identify those most important in determining productivity. Their results indicate that competitive pressure is the most critical factor in the investment climate, accounting for more variation in firm-level productivity than infrastructure provision or issues related to government rent seeking and bureaucratic burden. This suggests that to improve productivity, increase output, and reduce poverty, policymakers should focus reform efforts on removing barriers to entry and creating open, highly competitive markets.

This paper—a product of the Investment Climate Unit—is part of a larger effort to link firm performance to the investment climate. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact John Nasir, room F4K-180, telephone 202-473-5848, fax 202-522-2029, email address jnasir@worldbank.org. Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. Fabiano Bastos may be contacted at fbastos@worldbank.org. (30 pages)

### 3336. Dynamics of Income Inequality and Welfare in Latvia in the Late 1990s

Hippolyte Fofack and Celestin Monga  
(June 2004)

Fofack and Monga analyze the dynamics of poverty and income inequality during the recovery phase of the transition that characterized Latvia in the late 1990s. Despite a continued rise in income inequality, empirical evidence suggests an improvement in living standards, owing



largely to a significant surge in per capita income growth, particularly in urban areas. In a context of rising income inequality and widening urban-rural income and poverty gaps, the benefits of growth were not equally distributed, and poverty persisted in a number of regions (particularly in Latgale and Vitzeme) and among some socioeconomic groups (particularly households deriving their main income from social benefits). In addition to income inequality and asset endowments, poverty appears to be highly correlated with a number of labor market-related variables, particularly unemployment, suggesting that the labor market could be an important transmission channel from growth to poverty. However, though positive, the association between poverty and unemployment is non linear, especially in urban areas, where the labor market and demand are the most important channels of transmission through which growth and macroeconomic development affect household income and living standards.

This paper—a joint product of the Poverty Reduction and Economic Management Division, World Bank Institute, and the Poverty Reduction and Economic Management Sector Unit, Europe and Central Asia Region—is part of a larger effort in the Bank to improve understanding of the challenges of growth, employment creation, and poverty reduction in transition economies during the recovery phase in the late 1990s. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Carole Evangelista, room J4-261, telephone 202-473-7179, fax 202-614-0917, email address [cevangelista@worldbank.org](mailto:cevangelista@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [hfofack@worldbank.org](mailto:hfofack@worldbank.org) or [cmonga@worldbank.org](mailto:cmonga@worldbank.org). (40 pages)

### **3337. Do Households Gain from Community-based Natural Resource Management? An Evaluation of Community Conservancies in Namibia**

Sushenjit Bandyopadhyay, Michael N. Humavindu, Priya Shyamsundar, and Limin Wang  
(June 2004)

Community-based natural resource management is an important strategy to con-

serve and sustainably use biodiversity and wildlife in Namibia. The authors examine the extent to which conservancies have been successful in meeting their primary goal of improving the lives of rural households. They evaluate the benefits of community conservancies in Namibia by asking three questions:

- Do conservancies increase household welfare?
- Are conservancies pro-poor?
- Do participants in conservancies gain more relative to those who choose not to participate?

The authors base their analyses on a 2002 survey covering seven conservancies and 1,192 households. The results suggest that community conservancies have a positive impact on household welfare. This impact is poverty-neutral in some regions and pro-poor in others. Further, welfare benefits from conservancies appear to be somewhat evenly distributed between participant and nonparticipant households.

This paper—a product of the Environment Department—is part of a larger effort in the department to understand the linkages between poverty and the environment. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Sushenjit Bandyopadhyay, room MC5-223, telephone 202-473-7690, fax 202-522-1735, email address [sbandyopadhyay@worldbank.org](mailto:sbandyopadhyay@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The other authors may be contacted at [pschyamsundar@worldbank.org](mailto:pschyamsundar@worldbank.org) or [lwang1@worldbank.org](mailto:lwang1@worldbank.org). (25 pages)

### **3338. Finance, Inequality, and Poverty: Cross-Country Evidence**

Thorsten Beck, Aslı Demirgüç-Kunt, and Ross Levine  
(June 2004)

While substantial research finds that financial development boosts overall economic growth, Beck, Demirgüç-Kunt, and Levine study whether financial development is pro-poor: Does financial development disproportionately raise the income of the poor? Using a broad cross-country sample, the authors find that the answer is yes: Financial intermediary development reduces income inequality by disproportionately boosting the income of the

poor and therefore reduces poverty. This result is robust to controlling for simultaneity bias and reverse causation.

This paper—a product of Finance Team, Development Research Group—is part of a larger effort in the group to understand the link between finance and poverty alleviation. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Agnes Yaptenco, room MC3-439, telephone 202-473-1823, fax 202-522-1155, email address [ayaptenco@worldbank.org](mailto:ayaptenco@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [tbeck@worldbank.org](mailto:tbeck@worldbank.org), [ademirguckunt@worldbank.org](mailto:ademirguckunt@worldbank.org), or [rlevine@csom.umn.edu](mailto:rlevine@csom.umn.edu). (36 pages)

### **3339. A Policy Note on Telecommunications Reform in Algeria**

Paul Nomba Um  
(June 2004)

By the end of the 1990s, most industrial and many developing countries had liberalized their telecommunications markets to improve service accessibility and affordability for both businesses and households. In contrast, Algeria still managed its telecommunications sector as public property. The Ministry of Post and Telecommunications set the policy, enforced regulation, and was in charge of service provision. The sector suffered from huge supply shortages, the waiting list lengthened, the quality of service deteriorated and unbalanced the overall fiscal situation. In 1999, a new government appointed in the aftermath of President Bouteflika's election decided to change the situation and launched a comprehensive sector reform. Um reviews progress made in implementing this reform, discusses its preliminary impact, and comments on the main lessons learned. The author shows that by restraining arbitrary administrative action during the reform implementation, the government of Algeria laid the foundation for sustainable growth in the telecommunications sector.

This paper—a product of the Finance and Private Sector Development Division, World Bank Institute—is part of a larger effort in the institute to better understand infrastructure regulation. Copies of the paper are available free from the World

Bank, 1818 H Street NW, Washington, DC 20433. Please contact Gabriela Chenet-Smith, room J3-304, telephone 202-473-6370, fax 202-676-9874, email address gchenet@worldbank.org. Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at pnoumbaum@worldbank.org. (22 pages)

### **3340. If You Build It, Will They Come? School Availability and School Enrollment in 21 Poor Countries**

Deon Filmer  
(June 2004)

Increasing the supply of schools is commonly advocated as a policy intervention to promote schooling. Analysis of the relationship between the school enrollment of 6 to 14 year olds and the distance to primary and secondary schools in 21 rural areas in low-income countries (including some of the poorest countries in Sub-Saharan Africa) reveals that the two are often statistically significantly related. However, the magnitudes of the associations are small. Simulating big reductions in distance yields only small increases in average school participation, and only small reductions in within-country inequality. The data are mostly cross-sectional and therefore it is difficult to assess the degree to which results might be driven by endogenous school placement. Data can be geographically matched over time in three of the study countries and under some assumptions the results from these countries are consistent with no substantial bias in the cross-sectional estimates. Although increasing school availability by decreasing the average distance to schools can be a tool for increasing enrollments, it cannot be expected to have a substantial effect. Other interventions, such as those geared toward increasing the demand for schooling or increasing the quality of schooling should be prioritized.

This paper—a product of Public Services, Development Research Group—is part of a larger effort in the group to exchange ideas about development issues. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Hedy Sladovich, room MC3-607, telephone 202-473-7698, fax 202-522-1154, email address hsladovich@worldbank.org. Policy Re-

search Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at dfilmer@worldbank.org. (23 pages)

### **3341. How Have the World's Poorest Fared Since the Early 1980s?**

Shaohua Chen and Martin Ravallion  
(June 2004)

Chen and Ravallion present new estimates of the extent of the developing world's progress against poverty. By the frugal \$1 a day standard, they find that there were 1.1 billion poor in 2001—almost 400 million fewer than 20 years earlier. Over the same period, the number of poor declined by more than 400 million in China, though half of this decline was in the first few years of the 1980s. The number of poor outside China rose slightly over the period. A marked bunching up of people between \$1 and \$2 a day has also emerged. Sub-Saharan Africa has become the region with the highest incidence of extreme poverty and the greatest depth of poverty. If these trends continue, then the aggregate \$1 a day poverty rate for 1990 will be halved by 2015, though only East and South Asia will reach this goal.

This paper—a product of the Poverty Team, Development Research Group—is part of a larger effort in the group to monitor progress against poverty in the world. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Patricia Sader, room MC3-556, telephone 202-473-3902, fax 202-522-1151, email address psader@worldbank.org. Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at schen@worldbank.org or mravallion@worldbank.org. (41 pages)

### **3342. Financing Small and Medium-Size Enterprises with Factoring: Global Growth and Its Potential in Eastern Europe**

Marie-Renée Bakker, Leora Klapper, and Gregory F. Udell  
(June 2004)

Factoring is a form of asset-based finance where the credit is extended based on the

value of the borrower's accounts receivable. In recent years factoring has experienced phenomenal growth and has become an important source of financing—especially short-term working capital—for small and medium-size enterprises and corporations, reaching a worldwide volume of 760 billion euro in 2003. Although the importance of factoring varies considerably around the world, it occurs in most countries and is growing especially quickly in many developing countries. Bakker, Klapper, and Udell explore the advantages of factoring over other types of lending for firms in developing economies, and discuss the informational, legal, tax, and regulatory barriers to its growth. They also examine the role of factoring in the eight Eastern European countries that became EU members on May 1, 2004—the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, the Slovak Republic, and Slovenia, referred to as the EU 8. The authors conclude that factoring offers key advantages over other lending products and is likely to become more important in these countries, and suggest policies to accelerate its development.

This paper—a joint product of the Finance Team, Development Research Group and the Private and Financial Sector Development Department—is part of a larger effort in the Bank to study access to financing. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Agnes Yaptenco, room MC3-446, telephone 202-473-1823, fax 202-522-1155, email address ayaptenco@worldbank.org. Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at mbakker@worldbank.org or lklapper@worldbank.org. (43 pages)

### **3343. Linking Representative Household Models with Household Surveys for Poverty Analysis: A Comparison of Alternative Methodologies**

Pierre-Richard Agénor, Derek H. C. Chen, and Michael Grimm  
(June 2004)

Agénor, Chen, and Grimm compare three approaches to linking macroeconomic models with representative households in terms of their implications for measuring the poverty and distributional effects of

poverty reduction strategies. These approaches are a simple micro-accounting method, an extension of that method to account for changes in employment structure, and the Beta distribution approach. Even though in their simulation exercises the three methods do not lead to fundamentally different results in absolute terms, the authors show that potential differences in the measurement of distributional and poverty effects of policy shocks can be very large.

This paper—a product of the Global Knowledge and Learning Division, World Bank Institute—is part of a larger effort in the institute to evaluate poverty and the distributional effects of poverty reduction strategies. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Faythe Calandra, room J2-267, telephone 202-473-6440, fax 202-522-1492, email address fcalandra@worldbank.org. Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. Derek Chen may be contacted at [dchen@worldbank.org](mailto:dchen@worldbank.org). (48 pages)

### 3344. Disclosure of Environmental Violations and the Stock Market in the Republic of Korea

Susmita Dasgupta, Jong Ho Hong, Benoît Laplante, and Nlandu Mamingi  
(June 2004)

For almost 20 years, the Ministry of Environment of the Republic of Korea has published on a monthly basis a list of enterprises that fail to comply with national environmental laws and regulations. In this paper, the authors examine the reaction of investors to the publication of these lists and show that enterprises appearing on these lists have experienced a significant decline in their market valuation.

Firms in developing countries are often said to have no incentives to invest in pollution control because they typically face weak monitoring and enforcement of environmental regulations. The findings of the authors, however, indicate that the inability of formal institutions to control pollution through fines and penalties may not be as serious an impediment to pollution control as is generally argued. Environmental regulators in developing countries could harness market forces by introducing structured programs to release

firm-specific information about environmental performance.

This paper—a product of the Infrastructure and Environment Team, Development Research Group—is part of the group's work on industrial pollution control. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Yasmin D'Souza, room MC2-622, telephone 202-473-1449, fax 202-522-3230, email address ydsouza@worldbank.org. Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. Susmita Dasgupta may be contacted at [sdasgupta@worldbank.org](mailto:sdasgupta@worldbank.org). (39 pages)

### 3345. The Role of Infrastructure Investment Location in China's Western Development

Xubei Luo  
(June 2004)

Development of the western region is vital to the balanced growth of China. Luo studies the impacts of infrastructure investment that may most efficiently alleviate the burden of geographical remoteness of the West.

Having constructed the "adjusted distance" to approximate the transport cost, which takes into account the effects of real distance and infrastructure development, the author defines the "peripheral degree" to measure the effective remoteness of a province to an economic center. Using panel data for 1979–99 from the Chinese provinces, she shows that geographic attractiveness plays a significant role in a Solow-type growth determination model. Given the invariability of pure geographic position, progress in transportation facilities is essential to reduce the geographic handicap and to encourage the catching-up of the western region.

The author's simulation results show that the central transportation hubs (Hubei, Henan, and Hunan) merit most infrastructure investments, for they favor the development of many provinces, if regional balanced growth is considered as the prime objective. In particular, improvement in the transportation facilities in central hubs will have greater effects on western development than that in the western region by itself. Improvements in the transportation facilities of the central hubs substantially improves the geo-

graphic attractiveness of the western region by reducing the transport cost from the West to the Coast and by promoting the emergence of new economic centers in such hubs, which tends to modify the national economic geographic structure.

This paper is a product of the Office of the Vice President and Chief Economist, Development Economics. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Shunalini Sakar, room MC4-347, telephone 202-473-3028, fax 202-522-1158, email address ssakar2@worldbank.org. Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at [xluc@worldbank.org](mailto:xluc@worldbank.org). (26 pages)

### 3346. Achieving Accountability through Decentralization: Lessons for Integrated River Basin Management

Jyothsna Mody  
(June 2004)

While decentralization holds out the promise of increased flexibility and efficiency, the preconditions for realizing it are daunting. To draw lessons for productive decentralization in integrated river basin management, this paper surveys the decentralization experience in education, health care, roads, irrigation, and public infrastructure services. Case studies reveal that the prime focus in the design of a decentralized structure must be *accountability*, based on principles of subsidiarity, transparency, and allocation of property rights. While some debates are sector-specific, others, such as the need for political and financial accountability, the related data requirements, educating stakeholders and potential beneficiaries of the new system, and ensuring effective participation are true of decentralization wherever it is to unfold. In turn, initial conditions and the adaptation of political leadership to suit the historical context determine the success of decentralization. Four issues demand high priority in integrated river basin management. These are (1) overcoming financial inadequacy at the local level; (2) commitment to upgrading skills, particularly management skills, while also ensuring that the expertise accumulated in central bureaucracies is not dissipated; (3) assuring pre-reform beneficia-

ries that their rights would be protected; and (4) sustaining a long-term commitment to an inevitably slow and drawn out decentralization process. The main conclusions of the literature survey caution those who believe that decentralization is, in itself, a solution to problems of inefficiency and inequity in developing countries. Tradeoffs and tensions need to be reconciled (such as economies of scale versus local monitoring and integrated management or interregional equity versus local control).

This paper—a product of the Agriculture and Rural Development Department—is the result of the research project “Integrated River Basin Management and the Principle of Managing Water Resources at the Lowest Appropriate Level: When and Why Does It (Not) Work?” funded by the Bank’s Research Support Budget and the Rural Development Department. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Melissa Williams, room MC5-724, telephone 202-458-7297, fax 202-614-0034, email address [mwilliams4@worldbank.org](mailto:mwilliams4@worldbank.org). Policy Research Working

Papers are also posted on the Web at <http://econ.worldbank.org>. The author may be contacted at [modyjosh@yahoo.com](mailto:modyjosh@yahoo.com). (66 pages)

### 3347. Trade and Financial Development

Quy-Toan Do and Andrei A. Levchenko  
(June 2004)

The differences in financial systems between industrial and developing countries are pronounced. It has been observed, both theoretically and empirically, that the differences in countries’ financial systems are a source of comparative advantage in trade.

Do and Levchenko point out that to the extent a country’s financial development is endogenous, it will in turn be influenced by trade. They build a model in which a country’s financial development is an equilibrium outcome of the economy’s productive structure: in countries with large financially intensive sectors, financial systems are more developed. When a wealthy and a poor country open to trade,

the financially dependent sectors grow in the wealthy country, and so does the financial system. By contrast, as the financially intensive sectors shrink in the poor country, demand for external finance decreases and the domestic financial system deteriorates. The authors test their model using data on financial development for a sample of 77 countries. They find that the main predictions of the model are borne out in the data: trade openness is associated with faster financial development in wealthier countries, and with slower financial development in poorer ones.

This paper—a product of the Development Research Group—is part of a larger effort in the group to investigate the relation between finance and trade. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Patricia Sader, room MC3-306, telephone 202-473-3902, fax 202-522-1153, email address [psader@worldbank.org](mailto:psader@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [qdo@worldbank.org](mailto:qdo@worldbank.org) or [alev@mit.edu](mailto:alev@mit.edu). (30 pages)